THE BUILDER
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From a Sketch by MR. MARTIN S. BRIGGS, F.R.I.B.A.

MEETINGS

FRIDAY, *January* 17.

London Society. Mr. F. W. Parker on "London's Parks and Open Spaces." 5 p.m.

Architecture Club. Discussion on "The Charing Cross Bridge Scheme." At 34, Bedford-square, W.C.1. 8 p.m.

Institution of Mechanical Engineers. Informal Meeting. 7 p.m.

Institution of Municipal and County Engineers. Meeting of South Midland District. At Watford. 11.15 a.m.

SATURDAY, *January* 18.

Heating and Ventilating Engineers. Visit to the Tower Bridge. 2.30 p.m.

MONDAY, *January* 20.

Royal Institute of British Architects. Address to Students and Presentation of Medals and Prizes by the President, Sir Banister Fletcher. Also a review of designs and drawings submitted for the prizes and studentships, 1930, by Mr. W. H. Ansell. 8.30 p.m.

Royal Society of Arts. Mr. H. J. L. Wright on "Three Master Etchers: Rembrandt, Meryon, Whistler." 8 p.m.

Institution of Electrical Engineers (Liverpool Centre). Discussion on "Low-Temperature Carbonisation of Fuel, with special reference to its combination with the production of Electricity." 7 p.m.

TUESDAY, *January* 21.

Illuminating Engineering Society. Mr. H. C. Ridge on "Stage Lighting." 7 p.m.

Heating and Ventilating Engineers. Mr. R. Sutcliffe on "Air Conditioning for Cotton Mills." At Manchester. 7 p.m.

Institution of Electrical Engineers (North-Western Centre). Messrs. B. A. G. Churcher and A. J. King on "The Analysis and Measurement of the Noise emitted by Machinery." At Manchester. 7 p.m.

WEDNESDAY, *January* 22.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher, P.R.I.B.A., on "Roman Architecture." 6 p.m.

Liverpool Architectural Society. Mr. R. W. Maitland on "Architectural Lighting."

THURSDAY, *January* 23.

Institute of Arbitrators. Mr. W. E. Watson on "Remedies in Contract." 4 p.m.

Victoria and Albert Museum. Mr. Eric Maclagan on "Italian Sculpture of the Renaissance." 5.30 p.m.

Institution of Structural Engineers. Mr. G. F. C. Caswell on "Setting out and Erection of Multiple-story Buildings." 6.30 p.m.

West Yorkshire Society of Architects. Mr. R. J. Gordon on "Books on Architecture." At Leeds. 7 p.m.

Institution of Welding Engineers. Mr. C. A. Hadley on "Modern Improvements in Resistance Welding Machines." At Birmingham.

Southern Counties Federation of Building Trades Employers. Annual General Meeting. Connaught Rooms, W.C.2. 11 a.m. Followed by Lunch.

FRIDAY, *January* 24.

Institution of Structural Engineers. The "New Underground Railway Offices, St. James's Park—Notes on Foundation and Erection," by Mr. M. J. C. McCarthy. At Birmingham. 6.30 p.m.

Maison Dieu, St. Lo.

From a Drawing by Mr. A. C. Fare, A.R.I.B.A.

BY-LAWS.

THOSE who attended the debate upon "By-laws" at a recent R.I.B.A. meeting may have come away somewhat disappointed—in fact, there can be few who found much comfort, whatever their particular point of view. There was, indeed, very little constructive suggestion as to the directions in which these ordinances of local government need bringing up to date, nor, in absence of this, was there any official confirmation as to their sufficiency. We imagine a debate upon the subject, to be a really live debate, would need the attendance of, on the one hand, those who feel keenly that the average set of current by-laws are a hindrance to progressive building method, and, as their antagonists, those who feel that the same are a sheet anchor to building order, and need jealously guarding against dangerous relaxation. We can only conclude from the tone of the debate that both these classes of zealous enthusiasts, both of which we know to exist, were not represented at the meeting, and that the debate suffered in consequence.

Most of us recognise the need for law and order in such a responsible and technical task as the erection of buildings and their equipment in relation to the needs of public health. Our high standard of building in this country owes much to the governance under which it has been made to operate. In these days, when the number of irresponsible people who build has increased enormously, the need is perhaps all the greater, and it may have been something of the consciousness of this which tempered down to an ineffectual point the case which the mild anti-by-law party put up. But we cannot help feeling that there is room for some constructive revision, and that such revision might be made a real advantage to modern building.

A first and perhaps comparatively trivial step would be a simplification of terminology, which is at present wearisome and repetitive. It is something more than laziness which brings about frequent rejections of plans upon trivial points and the consequent delay of buildings, for most of the trivial points are so wrapped up in verbiage as to be well-nigh buried from sight. We should like to see some bold spirit run the blue pencil through ninety-nine of the repeated: "Every person who shall erect, etc.", which turns the potential pamphlet into a book. There would be little excuse under those circumstances for the trivial omission which so often irritates and inconveniences a score of people, and duplicates the work of enthusiastic plans committees.

Then again there are in force in most districts a number of hard-and-fast rules governing thicknesses and heights of walls. They were obviously framed when practically all the walls, other than stone walls, were constructed of bricks in lime mortar. It must be obvious that where certain conditions are sufficient for walls of this material, they may be more than sufficient where cement mortar is used or where some reinforced concrete construction is intended. In many districts these conditions are anticipated by certain relaxations, but in others they are not, and in nearly all the assumption seems to be that Portland cement is not likely to be used. In practice it is found that in most districts a certain gauging of cement is now the common practice. There is also food for debate in the fixed rules governing widths of streets and building lines. We may well despair of adding to the charm of the unexpected when our new ventures are so pre-determined, though it is true that anarchy is not a far cry from licence.

But a point which some architects make, and in which they make out a seemingly fair case, though in stating it we do not necessarily recommend it, is whether there is any need for a qualified architect to be governed by building by-laws at all. This may seem a startling and revolutionary suggestion, but it may be worth thinking about, and the possible consequences following such a step considered. The training of architects is supposed to be advanced year by year, and cases where the utterly unqualified successfully fix up their brass plates are getting rarer. It is only ignorance or criminal negligence which induces a person to erect a building which is not stable and not sanitary, and it is mainly the ignorant against whom the by-laws guard. If we have a properly trained class of technicians who know what will stand up for a century and what will not, is it necessary that the thought they have exercised upon building projects should be further scrutinised by a technical man? It is true that this may make assurance doubly sure, but is it possible for the innumerable plans which have come before the local authorities in these crowded years since the War to have been as thoroughly scrutinised as the law intends? The reflection follows whether we ratepayers are not paying for some inflated departments which are becoming increasingly occupied with routine work, and whether we cannot look to the skill and integrity of a learned profession to relieve these departments of much of their work so that their personnel could be reduced to something approaching pre-War numbers.

We will not go so far as to say that we should commit ourselves to such a policy, but we do feel that an occasion such as the debate referred to might well have served as an opportunity for exploring this idea in advance, and the absence of such a suggestion was not a little disappointing to those who look to the headquarter meetings to provide some constructive suggestions for the betterment of the routine of building.

As it was, most of the discussion arose round the question of the height of habitable rooms, and quite a lot of artificial heat was expended upon whether modern building demands a reduction of the present eight-foot limit by a further six inches. We have discussed this matter in our columns and have concluded that whereas the saving of two courses of brickwork upon a house does not offer any considerable means of economy, the question of health is more likely to be satisfied by maintaining the present reasonable limit, than by reducing it. It is somewhat surprising to find that there are people who look upon this matter as one of prime importance.

The question of using up the roof space is more important, since there are considerable economies possible where a reasonable latitude is allowed. The restriction of flat ceiling to one half, or two-thirds the floor space, is often satisfied by an actual reduction of the floor area of the room, and this seems to be an anomaly which might well go. Yet it took a second place in importance in the debate.

We are sure that those who took part in this debate will treat our criticisms as friendly, but we hope that when a similar occasion presents itself the Institute will be prepared with definite suggestions for important revisions, or will alternatively declare with authority that our by-laws are good and sufficient. Perhaps an early opportunity will be taken to repeat what should have been an instructive discussion, in an instructive way.

NOTES

The Board of Trade Buildings.

We publish this week the design for the Board of Trade buildings by Mr. Vincent Harris, which was accepted in competition before the War and which we hope will be carried out. In any case, the statement recently published in the **Press** that the building will probably be carried out from the design of a private architect affords justification for the hope and belief that the work will be entrusted to Mr. Harris. Is it too much to hope, also, that the Calton Hill buildings, Edinburgh, will also be designed and carried out by an architect in independent practice? A strong case has been made out for an open competition and we hope this course will be adopted.

Alternative Proposals at Charing Cross.

It has been most unfairly stated that there is no scheme put forward to take the place of the official scheme for Charing Cross bridge and its approaches. We have published one scheme, most carefully thought out in every way, which has been approved by a large number of expert opinions. Other schemes of merit we have also published, and now Sir Reginald Blomfield suggests another which is sure to meet with approval by many. He suggests that the Railway Company should be left to work out its own salvation and that a bridge should be built to the east of the present railway bridge leading across into the Strand at a high level, and he points out that this could be begun at once at a cost of some five million pounds. It is pointed out that this scheme shows a way of escape from the tyranny of the railway company and the menace of the official scheme which the more it is examined the worse it appears. One fact emerges from Sir Reginald's proposal, and that is that no full and adequate consideration has been given to the whole subject. We still reiterate that a far greater consideration is involved than the mere question of getting a finely designed bridge. All expert town-planners can see well enough that this important central area of London must be properly planned not only for traffic necessities, but for the sake of adequate development of the south side of the Thames and for the opportunity which should be afforded to give dignity and beauty to this central area of London.

From a Sketch by Mr. Martin S. Briggs, F.R.I.B.A.

Official Scheme Denounced.

The fact is that the official Charing Cross scheme places altogether too much emphasis on the demands of the railway company and neglects the public point of view, as Alderman Culpin pertinently remarks in a letter to *The Times* on Monday. *The Times* has stated that the main body of town-planning opinion is against the official scheme, in which not only is traffic not relieved but congestion is encouraged and development prevented. As a custodian of the public interests the London County Council can hardly

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proceed against so much well-considered expert opinion as is now arrayed against its proposals, which perpetrate one-way traffic tunnels 19 ft. high and over 100 yards long and provide traffic traps all over the place.

The Government's Decision.

The decision of the Government is that the Bill for the Charing Cross official scheme must proceed. We can only hope that the opposition to the Bill will succeed in preventing such a disaster to London. It is quite evident that a true vision of the matter has been denied to the promoters. Mr. Morrison sees the problem as one of traffic, engineering, valuation and architecture—not a word about town planning, which is at the root of it all, and in the consideration of which the architect should play the most important part. It has been said that the opposition is merely destructive, but quite enough has been said and shown to prove that the opposition has definite constructive proposals to bring forward. So much of the very best expert opinion is behind the opposition that it will be a standing reproach to our authorities if they refuse to give serious consideration to all that can be said to guide to a right conclusion so serious a matter for London. It is difficult to see how a more strenuous appeal could be lodged against the proposal to do a lasting and serious injury to the Metropolis.

Dutch Windmills.

Mr. Jan den Tex gave an illuminating and entertaining lecture on Windmills in Holland recently in the Hall of the Royal Society of Arts, under the auspices of the Society for the Protection of Ancient Buildings. The meeting had been arranged partly in order to test the degree of interest existing in the whole subject, in the hope that support might be forthcoming for the efforts to make a record of the English windmills, and to save such as are worthy of preservation. No better means of stimulating interest in recent or projected activities in this country could have been devised than this of securing an expert to speak, not only on windmills in general and some of the details of their construction and working, but also to describe what has already been accomplished for their preservation in that essentially windmill land of Holland.

Various Types of Mills.

Mr. den Tex began by differentiating between corn-mills, marsh-mills and mills used for industries such as linseed oil, paper and others. In Holland there was no water-power, no "living water," but there was much "dead water" which threatened the land. There was, however, a large amount of wind, which could be utilised for defending the land against the water. Many of the windmills shown on the screen were marsh mills. The lecturer described the various types of mill, beginning with the early post-mill, of which an example is still in existence similar to the form built in the fifteenth

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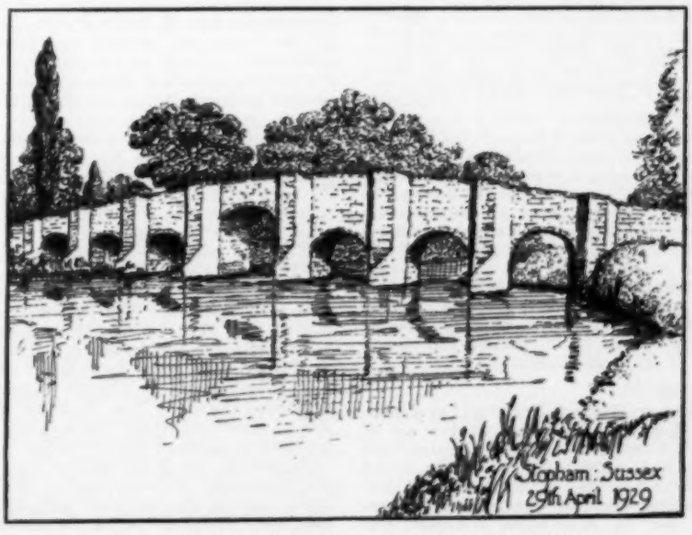
century. From the post mill, closed in around the centre post, came the development of a house for the miller, or the marsh man. Illustrations were shown also of the smock mill, and the still later tower mill. This type was specially adapted for towns, and the City of Antwerp at one time had eighteen such mills on its ramparts. Mills for drainage were fitted with a scoop-wheel or else with an archimedian screw or a pump. The systems by which the mill could be adjusted to the wind, methods of shortening the sails, braking, and other technical and mechanical details were ably and clearly described, and the evident interest of his audience was a tribute to the courage of Mr. den Tex to undertake so varied a lecture in a language not his own.

Windmill Beauty.

With equal fluency Mr. den Tex sprang from the intricacies of wind velocity, and the advantages and disadvantages of the automatic fan tail, to lighter aspects of the subject, such as the fact that each Dutch mill has its own name, and the diverting decorations with which windmills of a former generation used to be adorned on national or family occasions of festivity. He expressed the opinion that "windmill beauty does not depend on rarity or uniqueness," and that the "unemployed windmill," while lacking some quality of that still in use, was none the less a thing of beauty, since it was originally planned to be fit for its purpose. He pleaded with "windmill enthusiasts," which many of his audience have no doubt become, if they were not already members of that fraternity, to preserve the windmills of England. He expressed the conviction that English enterprise and Dutch conservatism between them should be able to concoct some satisfactory modern method of using and preserving the windmill. A short series of photographs of English mills was then shown on the screen and explained by Mr. Rex Wailes, after which those particularly interested in the subject gathered round a model of a smock mill for further discussion in the cause of these unique features of our remoter rural landscapes.

Ready-made Plans

We made some comments the other day on the work of an agency for supplying ready made plans of cottages, etc., for the use of architects and others, at a moderate fixed price. To the general public this will possibly make an appeal, but no reputable architects are likely to countenance it, nor is his cheap supply of ready made plans likely to benefit anyone. There are plenty of qualified men ready to give the public help at a moderate cost, and one wonders why the public can be attracted by advertisements of this kind, which are pretty sure to lead to illusion and disappointment. No doubt the public who make use of such help are unaware of the value of qualified architectural assistance, but we believe the knowledge of the building public of the wisdom of obtaining architectural advice is on the increase.



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GENERAL NEWS

Professional Announcement.

Mr. Laurence M. Gotch, F.R.I.B.A., late of the firm of Gotch & Saunders, of Kettering and London, is now practising under his own name at St. Mildred's-court, Poultry, London, E.C., whilst his late partners are continuing the practice at Kettering under the old title.

The Incorporated Association of Architects and Surveyors.

At a meeting of the Council of this Association on January 11, Alderman Ewart G. Culpin, L.C.C., F.I.A.A., M.T.P.I., was elected President of the Association for the ensuing year. The retiring president, Major R. I. Tasker, and Mr. Alfred Stephens Cross, M.A., F.I.A.A., a former vice-president of the R.I.B.A., were elected vice-presidents of the Association.

Dublin Municipal Extensions.

Application has been made by the City Commissioners to the Minister of Local Government (1) for sanction to a loan of £35,000 for the provision of a Municipal Gallery of Modern Art and Cino Museum; (2) for £40,000 for the installation of additional filters at Roundwood Reservoir; (3) £78,000 for the purposes of the Small Dwellings Acquisition (Ireland) Acts.

A New "Great Seal."

The announcement is made in the annual report of the Deputy Master and Comptroller of the Royal Mint that a new great seal of the realm is likely to be ready next year. The report states that models have been examined, but the results are not considered satisfactory in all respects. It is hoped next year to report definite progress in the preparation of "this highly important instrument of State."

Ancient Manor House, High Wycombe.

The ancient manor house of Bassetsbury is to be preserved and enlarged by the addition of a wing. By the utilisation of old materials the new portion will correspond with the rest of the structure. The manor house, a seventeenth-century building, stands on the site of an older structure, known as the Castle of Alan Basset. In 1280 the manor comprised "house and herbage, with 260 acres of land, and five mills," one of which exists to-day close by the house, and has a fine water-wheel

The "Camden Town Group."

An exhibition of an unusual character will be opened at the Leicester Galleries on January 13. It will take the form of a review of that association of painters known before the war as the "Camden Town Group." Twenty years ago their work was neglected, but fame has come to most of them since, and of the sixteen original members the majority is now represented in the Tate Gallery. Notable members were the late Spencer Gore, Augustus John, the late J. D. Innes and Richard Sickert.

Architects' Estates.

Mr. Keith Downes Young, F.R.I.B.A., of St. John's Wood-court, St. John's Wood-road, N.W., and of Southampton-street, Bloomsbury, W.C., architect, of Messrs. Young and Hall, who had specialised in hospital construction, and who died on December 1, aged 31, left estate of the gross value of £19,646, with net personalty £19,214.

Mr. Henry Holgate (65), of Keighley-road, Colne, Lancs, architect and surveyor, of Holgate and Spivey, architects, of Colne, "so far as at present can be ascertained" (net personalty £7,386) left £9,906.

A. H. Kerr.

Mr. Arthur Herbert Kerr, of Lyndhurst, Malton, Yorkshire, has died at the age of 67. The eldest son of the late Admiral Lord Frederic Kerr, Groom-in-Waiting to Queen Victoria, he was born on February 10, 1862, and was educated at Charterhouse, where he was the last nominated Gownboy, and at the College of Agriculture, Downton. Becoming a land agent and valuer, he was president of the Land Agents' Society in 1912-13, a member of the Surveyors' Institution, and a life member of the Institution of Sanitary Engineers.

Restoration of Boston Stump.

The work of restoring the church at Boston ("Boston stump") was begun two years ago. All the nave roofs have been ravaged by the death-watch beetle, and cracks had appeared in the famous tower. It was estimated that £30,000 would be required. During the last year the restoration of the nave roof has been completed under Sir Charles Nicholson's supervision. The 18th century ceiling has been displaced by a handsome oak ceiling, panelled and decorated, and the roof has been entirely reconstructed. The clerestory has been freed from the disfiguring work that masked the windows, says *The Times*, and the fine proportions of the church are now fully realised. Work has begun on the south aisle, and it is hoped that the restoration of both aisles will be completed this year and that in 1931 work on the tower will start.

Southern Railway Development.

About £4,300,000 is to be spent by the Southern Railway this year on various new works, including locomotives and rolling stock, new steamships, new stations, station improvements, extension of electrification, etc. The building programme includes:—Exeter (Queen-street), reconstruction of station, etc., £197,000. Dover, new Customs shed, £96,000. Hastings, station reconstruction, £202,000. West Croydon and Beddington-lane, widening of line, £72,000. Dover Priory, station reconstruction, £135,000. Ashford (Kent), new locomotive depot, £81,000. In connection with the extension scheme at Southampton, the necessary embankments for the reclamation of a further 170 acres are under construction. The work to be carried out there during 1930 will cost about £800,000, and will include a new quay wall, now being constructed, and an embankment at Millbrook. Work costing £24,000 will be completed at Newhaven Harbour, and work costing £26,000 at Folkestone Harbour.

English Architectural Styles.

During the series of Christmas lectures on architecture for boys and girls at the Royal Institute of British Architects, Conduit-street, the Hon. H. A. Pakington described the development of English architecture from the Renaissance down to the "battle of the styles" in the days of Queen Victoria. Speaking of the Banqueting Hall in Whitehall, he said that it now took its place naturally in a London street, but at the time it was built it created such excitement as would be caused now if a Chinese pagoda were set up in Piccadilly-circus. The story of the battle of the styles was a silly story. Previously we had had a Gothic period and a Renaissance period, but one style at a time. In the nineteenth century the Gothic and Renaissance styles were run together. It was as if half the people of the country went about dressed in Roman togas and the other half in leather jerkins and fur caps. They did not think of dressing their buildings in the clothes of their own day. The Houses of Parliament, designed by Sir Charles Barry, who had made his fame by work in the Italian manner, were dressed outside like a Gothic building. But at heart the building was really a Renaissance one. From outside one could not see where the House of Commons, the Speaker's House, and the House of Lords were, just as was the case with the rooms in a Renaissance house. Pugin, who did the decoration, dressed the statues of kings and queens in Tudor costume as if they were going to a fancy dress ball. He even designed Gothic inkpots and umbrella stands. The lecturer said he looked upon the Crystal Palace as the greatest building of Queen Victoria's reign, not in its little details, but in its general idea. It was the forerunner of much modern work. The lesson which the lecturer emphasised was that architecture should be "a sort of picture in the solid of the age in which we live."

COMPETITION NEWS

Burgh of Clydebank War Memorial.

The Town Council invite the submission of designs for the erection of a cenotaph as part of the war memorial. Further particulars as to the designs to be submitted and the conditions applicable may be had on application to the Town Clerk, Municipal Buildings, Clydebank.

Ongar (War Memorial) Cottage Hospital.

The following notice has been issued by the R.I.B.A.:—"Members of the Royal Institute of British Architects and of its Allied Societies must not take part in the above competition because the conditions are not in accordance with the published regulations of the Royal Institute for architectural competitions."

COMPETITIONS OPEN

	Particulars published in "Builder."	Sending in date
Designs for Anzac Memorial, for the Trustees, to be erected at a cost of £75,000 in Sydney, N.S.W. Conditions from Agent-General for N.S.W., Australia House, W.C.2. Copies also at R.I.B.A.	Aug. 30	Jan. 31
New Police and Fire Stations in Manchester-rd., for Accrington T.C. Mr. H. J. Rowse, F.R.I.B.A., assessor. Premiums of £250, £150 and £100. Town Clerk, Accrington. Dep. £2 2s.	Oct. 4	Feb. 10

THE MASTER BUILDERS OF ROME

Sir Banister Fletcher, P.R.I.B.A., at the Central School of Arts and Crafts, on January 15, gave a lecture (the first of a series) on Roman architecture of classic times. The lecturer first drew attention to the influence which affected Roman architecture during the time when the world-wide Empire of Rome was at the zenith of her greatness. The Romans had an abundance of building materials at their disposal—the white and coloured marbles of their own quarries, building stone, and brick-earth for terra-cotta, granite from Egypt, porphyry from Greece, and all the glowing marbles from the coasts of the Adriatic and the Mediterranean. An expanding empire and a complex civilisation gave birth to a variety of building needs, to meet which the Romans invented a new composite material, which was made up of broken stone and pozzolana cement and poured like a household jelly into moulds and left to set. Then the wooden casing was removed, and the concrete remained, hard and rigid. The invention and use of this material was the great outstanding fact in the structural aspect of Roman architecture; for this quality of rigidity made it possible to cover great areas with domes and vaults of concrete. Thus these complicated types of buildings broke away from the simple trabeated style of the Greeks. This revolution in methods and plans opened the way for great utilitarian works, such as city aqueducts and cisterns, military bridges, public baths, and imperial palaces, some of which were allied to engineering undertakings.

These splendid Roman structures, often so complex in plan, were yet symmetrical, for they were planned on axial lines, which gave long vistas and an appearance of unity. The circular sweep of the Pantheon also showed that the old Roman architects could command as well the perfection of simplicity. The composite origin of Roman architecture was a union of the old native Etruscan arch and vault, with the Greek column, to which the Romans added their own cross vault and dome. Above all it was evident that their idea was not art, but empire—it was not so much to create a thing of beauty as to produce lasting evidence of power.

CORRESPONDENCE

New Year Number of "The Builder."

SIR,—May I be allowed to congratulate you on last week's issue of *The Builder*? As long as we have such sane, prophetic and disinterested writers as Lethaby, Hallward, Beresford, Howard Robertson, and Angus with us, we need not despair of the future of architecture. As a tonic for the pessimists your new year messages could scarcely be bettered.

There is much that might be commented upon and a few things which might be disputed, but without subject for controversy life would lose its savour. There is ample room and use for the traditionalist and the sanest of the modernists. Ours is a great and sporting profession, and the present adversity will pass if only we keep together in spite of disappointments and ignorant opposition.

AGE QUID AGAS.

Official and Private Architecture.

SIR,—Mr. Ernest Bright's letter in *The Times* of January 3 gives some illuminating sidelights into the working of the Office of Works department. He accuses former correspondents of being anti-official, but his own letter is distinctly anti-unofficial. He tells us that the technical staff of this department "consists of men who have been specially trained as architects." Surely this has never been questioned. He further states that it is not for him "to say why one man should elect to devote his skill to the erection of public buildings (*i.e.*, enter the Office of Works) while another prefers to take his chance of success in private enterprise." Later on he gives us a distinct clue as to the possible reason for a preference.

Your readers will have no difficulty in recalling the Mond-Baines controversy. To quote again:—"The Office of Works has specialised in many ways, and the services of its leading architects have been requisitioned by outside bodies and private persons where difficult problems were involved." We could quote many cases where they were called in where quite simple problems were involved, and it seems difficult to believe that the State, as employer, would employ men at a large salary and give them the right and freedom to answer the call of outside bodies and private persons who would wish to secure skilled advice free of charge at the expense of the ratepayer and to the loss of the outside private specialist.

The whole tone of Mr. Bright's letter would suggest that he is convinced that no outside architect could design successfully a public building or deal with any difficult problem in building or restoration work as successfully as a member of this department. Mr. Bright's description of the "Harcourt" incident is hardly to the credit of the Office of Works. Could any private architect afford to consider such a job as a provincial post office as "not worth bothering about"? Is it in the interests of the art of architecture that the First Commissioner of Works should act as critic and assessor when he possesses no qualifications for such a post?

Mr. Bright's last item is worthy of special note in view of recent correspondence. To quote from his letter again:—"I would observe that it has ever been the practice of the department to invite designs from unofficial architects in the case of the erection of buildings of unusual importance, either owing to their special object or prominent position." He then mentions only three buildings carried out by outside architects. Sir Brumwell Thomas's letter, dated June 29 last, which appeared in *The Times*, gave a long list of important public buildings which were to be commenced or carried out by the Office of Works during the past twelve months, and in the case of the Calton Site at Edinburgh, the insistence of the First Commissioner of Works that this building shall be carried out by the Office of Works disproves Mr. Bright's statement.

Here we have a really important building on a prominent site. The building is estimated to cost at least £500,000. According to "Hansard," reporting the recent debate in the House of Commons, Mr. Lansbury stated that the Office of Works has been working for about two years on this scheme. They have so far shown no special qualifications for this particular job, as their first design was condemned by the Fine Art Commission. Could a private architect have spent so much time and money on a scheme without solving it and still hope to retain the confidence of his client?

Sir Lionel Earle made the same statement about "really important buildings" being given to outside architects before the Committee of Public Accounts last February, but Lord Londonderry made it clear last May, when First Commissioner to the department, that it was the intention that all public buildings should in future be done by the Office of Works. In the case of the Calton Site buildings, it is clear that it cannot be cheaper to allow the department to work so long on the designs for one special building than to hold an open competition for the design.

The House of Commons may be fully informed as to the work of this department, but it is unfortunate that when any discussion takes place in the House on architectural matters the House is invariably counted out. This would seem to indicate that the Members are not interested in this subject, although it is of so great importance to a large section of the community.

It is well to know that the Office of Works does not flinch from a committee of inquiry into the working of its department, for such an inquiry seems overdue in view of the contradictory statements which have emanated from the department during the last twelve months.

WILLIAM DAVIDSON.

The Drawing of Architecture.

SIR,—With reference to Mr. William Davidson's points, I should like to state that my reasons for considering the R.A. and the R.I.B.A. to be die-hards are two: firstly, the R.I.B.A., by its insistence on a commission of not less than 6 per cent., has driven the major part of the architect's work away from the architect. Now that the damage is done they are endeavouring to get into touch with the people's needs, but I say that if architecture does not exist for the people it ought not to exist at all.

Secondly, the R.A. allows the R.I.B.A. to tread on its corns. Painting is no more architecture than architecture is painting or medicine law. Kitchener was no fool when he said: "I am a soldier, not a politician," and no one is going to deny that the greatest bar to modern progress is lack of organisation. Industry is suffering from it; so, too, are its younger children, the arts. On the question of camera perspective, I challenge Mr. Davidson to show the similarity between what the eye and what the camera sees.

O. NEWBOLD.

Greek Sepulchral Monuments.

SIR,—Does Mr. Whittick quite appreciate the significance of body burial as compared with cremation in ancient Greece? The disposal of the body after death was never a question to be settled by the spin of a coin, nor the accident of demise occurring during a long week-end from home.

The people who buried their dead in the great grave at Mycenæ were of a different race and religion from Agamemnon and his comrades. At Mycenæ everything points to the worship of the dead as it had been depicted on the sarcophagus of Hagia Triada, but in Homer there is no trace of ancestor-worship. The Achæans of the Iliad burned their dead; the Mycenæans buried theirs.

If there is one fact of more importance than another, in following the destiny of the Greek people, that fact is the significance of the substitution of burning in place of burying the body, the meaning of which Mr. Whittick quite fails to realise.

EDWARD R. BILL, A.R.I.B.A.

Tribute to Architects.

SIR,—Quite recently we have been discussing the advisability of architects signing their work. As a student of ecclesiastical architecture I feel that not enough has been done by Great Britain to make known the work of such men as Flitcroft, Gibbs, George Dance, Smirke, Hawksmoor, and other great church architects, men whose fame seems to have faded into obscurity. Surely we can remedy this.

CHARLES MATTINGLY.

Combustion.

SIR,—Referring to a letter which appeared in your issue of the 27th ultimo, it is a pity your correspondent, "P. Q. X.," by stating that "carbon dioxide is a deadly poison" tends to perpetuate a common fallacy.

Consider the following facts:—Human breath invariably contains 1-2 per cent. up to 5 per cent. of carbon dioxide. The air at mineral-water factories may contain up to 3 per cent. owing to the use of carbon dioxide to produce the effervescence (ginger beer contains carbon dioxide at about 15 lb. pressure, soda water up to 10 times this amount). Carbon dioxide is mixed with air for administration to patients suffering from carbon monoxide and other gas poisoning, the only effect at 5 per cent. concentration being to increase the breathing rate, which is beneficial for such cases. It is an essential constituent of modern mine rescue apparatus.

It is probable that this common misconception regarding carbon dioxide has arisen owing to the old ventilation standard for schools, factories, etc., wherein the concentration of this gas is taken as a criterion of health conditions.

A concentration of 0.12 to 0.20 per cent. was considered the maximum limit, not because this gas itself was "poisonous" but because, being under those conditions largely of human origin, the high associated bacteriological impurity concentration would become hygienically intolerable—and the CO_2 is easily measured, whereas the other products of respiration are not. Partly, perhaps, error has arisen owing to confusion between carbon monoxide and carbon dioxide; the former is certainly poisonous, a concentration in excess of 0.20 per cent. being measurably harmful. It is owing to the presence of carbon monoxide that tragedies sometimes occur owing to the incomplete combustion of fuel, the papers making us familiar with cases having their origin in mine explosions, charcoal braziers, motor exhausts, or defective gas appliances in places where ventilation is inadequate.

No quarrel, however, can be maintained with "P. Q. X." in his advocacy of adequate flue equipment on boilers and the like apparatus. With fuels other than gas the smoke and sulphur content in the flue products will be sufficiently objectionable to force any user to ventilate to the outside air. In the case of gas burnt in a correctly designed appliance, the products are themselves unobjectionable—being comparable to expired breath except that they are bacteriologically sterile, but since an appliance burning, say, 50 c. ft. of gas per hour will correspond in its production of flue gases to the breathing of several dozen people, the desirability of flue equipment for gas apparatus is evident.

J. C. WALKER,
Secretary,
The British Commercial Gas Association.

***We forwarded this letter to "P. Q. X.," who replies as follows:—

SIR,—Mr. Walker's letter is certainly a most ingenious argument. Is it intended to

show that carbonic acid gas is, on the whole, a most desirable ingredient of the atmosphere? He states that it is a fallacy to say that carbonic acid gas is a poison, but he does not say what it is. For the purpose I had in view, I regard it as a deadly poison in its qualities. For consider: (1) It is colourless, (2) odourless, and (3) very heavy. Hence it is not easily detected by the layman, and sinks to the floor; accumulating, it raises the percentage volume present quickly beyond the *tonic* proportions so lovingly mentioned by Mr. Walker, and so becomes most dangerous to life. Witness the deadly effects of *choke-damp* in disused wells, in coal mines, etc., and many inquests.

Mr. Walker's quotations are quite beside the points raised by my letter. What can be said in favour of a gas that is a *non-supporter* of life as well as of combustion? Let us be rid of it as far as possible. Its action upon a person when combined with solids and liquids and taken via the stomach is another matter altogether. Except as a clever piece of special pleading, Mr. Walker's letter is of no value, and only tends to obscure the real issue, which is that the products of combustion are *dangerous* additions to the atmosphere of rooms, etc., to be breathed by people assembling there, and it is the business of architects and builders to provide flues for their immediate removal. The business of the ventilators is to get rid of the breath (which is strictly *the products of combustion* of the body) and any germs, etc., present.

One last word: Notice in the last paragraph the words: "In the case of gas burnt in a correctly designed appliance, the products are themselves unobjectionable. . . ." Mr. Walker knows that this is wrong; the products are, under the conditions named, very objectionable by reason of the large percentage of carbonic acid gas present, and in spite of the ingenious statements made I am totally unconvinced that gas stoves without flues are desirable additions to any dwelling-house. The builder's unconscious antidote is draughts.

P. Q. X.

Guaranteed Quantities.

Sir,—Mr. J. R. Taylor, in his article in last week's issue, raises the interesting point of guaranteed quantities. The man who never makes a mistake has never yet lived, though the man who will not admit a mistake is well known to all. It seems to me, however, that the architect or client should look not to a written guarantee from the surveyor with a pecuniary penalty in case of error (which is what I imagine Mr. Taylor has in mind), but rather that he should look to the competence, responsibility and qualifications of the surveyor he employs. An architect does not guarantee his drawings—at least it is not unknown for mistakes to occur which involve alterations in the building after construction, mistakes which the architect does not pay for. A solicitor who prepares an agreement does not guarantee that no action will arise out of it, nor even that if action arises his client will win his case. If a bill of quantities is carefully prepared by a competent surveyor with a competent staff nothing more than minor errors should occur, and these, the quantities forming part of the contract, can be adjusted (as the usual R.I.B.A. contract provides). A serious error which may perhaps have led a client to enter into a contract that, had he known of the error, he would not have done, is in another category. Such an error lays the surveyor open to a charge of gross negligence and its consequences.

The builder to protect himself should see that the bills of quantities are part of the contract, and the client or architect for their protection should be satisfied that the surveyor is a properly qualified man, able to carry out with proper professional skill the work with which he is entrusted. *They chose him; by his merits they must stand or fall.*

Arthur J. Willis.

"THE BUILDER" DEBATE

XXV.—CAN OUR STUDENTS DRAW?

Sir,—That the proof of the pudding is in the eating is only a limited truth, because tastes and stomachs vary with the individual. "Negative" has eaten the pudding and found it delightful food. I, too, have eaten, and it has sorely disagreed with my digestion. So we do not get very far in debate on those lines. The mere fact that students from the schools are quickly absorbed into the labour market is also insignificant, because the fashion of training sends the majority of students to the schools instead of into offices, and the quest for an assistant has to be in the limited field of school-leaving students.

It is somewhat surprising to hear it put forward as a defence of modern draughtsmanship that poor work has been hung in the Academy by virtue of the skilful camouflage of the draughtsman. If it is really claimed that experienced architects who have been honoured as Academicians have actually been hoodwinked by dishonest draughtsmanship, it is strange indeed that the same men who have fallen to such futility should elect to purge the exhibition of similar insincerities. Either they are big enough fools to be dazzled by display, or wise enough men to see through the display; one cannot have it both ways. The truth of the matter is that the "painter" element has too much predominated in committee, and the architects have at last asserted themselves to insist that designs should be rendered as architectural drawings instead of as colour compositions. Our students have not been giving us architectural drawings, and it is only in the sense of architectural drawing that I am maintaining argument.

I recently made a comparison between the sketch-book of an elderly practitioner and that of a youngish student, in both of which were the evidence of a facility in pencil work. The former was full of study, and an education in itself to look through. There were not only pleasing compositions, but notes of such facts as contours of mouldings, and key measurements, which explained the means by which the effect was produced. The other was a superficial sort of affair, in which one felt that no single clever snapshot had taken more than a quarter of an hour to produce, and that whatever effect the work had had on the student, by the doing of it, would be lost in as short a time as the effort had been maintained. Whatever latent ability our students may have in the way of drawing, they will never come to be architectural draughtsmen until they have been taught and encouraged to study—to seek no quick effect until the whole means by which effect may be produced has been appreciated and absorbed.

I believe that this superficial, indolent element in architectural draughtsmanship, which seems to be becoming general, is directly reflecting upon the quality of design. You can read "tee-square and set-square" all over the typical "modernist" front, and it makes unpleasant reading. Draughtsmanship is a means to an end, and not an end in itself. But it is a means which leads very directly to an end. Industry and tenderness in draughtsmanship will generally lead to scholarly and refined design, whereas the slap-dash drawing is likely to produce an ill-considered design. Study is not popular, but it is the only road to success.

Positive.

* Correspondence on this question is invited. All letters received will be published next week.—Ed.

An Antiquary's Estate.

The Rev. William Fothergill Robinson, M.A., F.S.A., of Villa Rampolla, Garda, Verona, Italy, who died on August 29, left property in England of the gross value of £11,652, with net personalty £11,169.

ARCHITECTURE IN DAILY LIFE

On Saturday Mr. Howard Robertson, F.R.I.B.A., S.A.D.G., delivered the first of a series of popular lectures being given on Saturday afternoons at the Architectural Association, Bedford-square, W.C.1. His lecture was entitled "Architecture in Daily Life." Architecture, said the speaker, which to a certain extent had stagnated for many years, was now taking a forward movement in response to the spreading demand that it should satisfy the needs of the day and correspond to our daily life. It was in the designing of the house that the architect had the freest hand. The house had always reflected the domestic requirements of the day and expressed the taste or culture of its time. In the Victorian age it became rather corrupt, which he attributed largely to the influence of Ruskin, with his passion for the Gothic. The house was then overloaded outside and inside. It was pretentious and seemed to express side-whiskers and a certain pomposity in living. It was perfectly frank in its badness. The present architectural style was for clean, simple exteriors, notable for their severe lines. It despised any conscious reproduction of the past. For the first time light had begun to be appreciated. The same expression of the mechanical line was seen in the furniture and fittings. Exhibiting a plan of a Victorian mansion, he said that a careful study of that plan had failed to show him how anyone got from the kitchen to the dining-room; but apparently it was via the passage, the vestibule, the stair lobby, the so-called private passage, the main corridor, passing up the upper stair, and so into the dining-room. Such a house had to be run regardless of expense, but when it was built servants were plentiful. Modern houses were not only very much smaller, but also very much more conveniently planned than the Victorian mansion.

The lecturer admitted that the comfort of such rooms depended on whether they found reflection in the minds of the occupants. Most of the illustrations of domestic architecture which he showed on the screen were German. One might miss from them, he said, the flavour of softness. There was an absence of decoration. The walls were without pictures. But there was beauty, he thought, in their fine and simple lines, and they excelled in domestic comforts and conveniences. The chief danger to-day was the tendency to bureaucratic interference. The Office of Works, for example, was proposing to take over work which had formerly been done by architects in open competition. The reason assigned was that the Office of Works knew its own business best. The same tendency was seen in the scheme for the Charing Cross bridge. That was a matter of enormous public interest, vitally affecting the people of London, and yet they were not consulted, and architects were but slightly recognised. If this tendency were not checked the independent architect would cease to exist, and architecture, becoming an official job, would be badly done.

University Extension Lectures.

In the programme of University Extension Lectures recently issued by the University of London appear many courses which should make a strong appeal at the present time. At the Victoria and Albert Museum on Thursday afternoons (commencing on January 16) Mr. Percival Gaskell is delivering an illustrated course which has been specially designed with a view to the great exhibition of Italian Art at Burlington House. For those who are unable to attend an afternoon series an evening course on Venetian Painting has been arranged for Tuesdays at Gresham College. A full list can be obtained on application from the University Extension Registrar, University of London, S.W.7.

THE WORK OF THE BUILDING RESEARCH STATION.

A MEETING of the Architectural Association was held on Monday evening at 34, Bedford-square, Mr. F. Winton Newman presiding, when a lecture was given by Dr. R. E. Stradling on "The Work of the Building Research Station." The preliminary business included a vote of condolence with the relatives of the late Sir Lawrence Weaver (chairman of the Architecture Club), Mr. Keith D. Young and Mr. W. L. Lucas. There were sixteen nominations, twenty-two elections and one reinstatement. The Chairman announced the nomination of Mr. G. W. Home to fill a vacancy on the Council.

Dr. Stradling, in the course of his address, said it was rather a commonplace to start off a talk about building by a statement that it was a traditional industry. But did we always realise how much was implied by a statement of that kind? Man's original idea in building was to provide a form of protection for himself against the weather or other enemies, and coming down through the ages we had accumulated a vast amount of what might without exaggeration be called folklore. Much of the building industry to-day was carried on by traditional forms of construction that had been handed down from generation to generation, and had proved effective with the materials and craftsmanship available at the time when the traditions were founded. How did a traditional industry develop? By experimentation on a large scale, but experimentation without isolating the various factors as was done in the scientist's laboratory. Something was built and everybody saw whether it stood or not. The old bridge at Pontypridd, for example, was the result of a third attempt on the part of its builder and designer, William Edwards, a man who, having been first a shepherd on the hills and then a mason, was entrusted with the task of putting up the bridge. His first bridge was swept away by a flood, his second collapsed when nearly finished; but the third attempt succeeded, and the bridge was standing to this day, though now with a reinforced concrete one beside it.

A great risk which attended the endeavour to vary anything in a traditional industry was due to the fact that when one varied any one of the folklore rules one did so blindly, and one's first effort was pretty well doomed to failure. For instance, we all knew of the very great number of efforts that had been made, especially since the War, to vary traditional construction, getting out a type of construction which should be cheaper and at the same time do the same work. But of all these alternative methods of construction he did not know of one which had really been a success. There had been successful points in a great number of them, but taken as a whole the effort to change our tradition had not proved very successful.

What were the facts that made it necessary for us to vary our tradition at all? Why could not we go on with the folklore that we had? The answer was, first, that we had not got the traditional materials on which the original folklore had been developed—we had some of them, but not all. Next we had not got the same type of craftsman, and, in addition to that, different demands were being made on the industry. For example, there was an overwhelming demand for a cheaper type of building, and as a consequence people had thrown overboard some of the more expensive forms of our folklore in which the labour factor was particularly high. We wanted to use the traditional materials in a cheaper way, and to utilise the new materials which were being offered to us. With the demand for economy came the offer to the industry of new materials, new forms of construction, and so on; and it was a very real difficulty to judge whether these were sound or not. This was because we did not know what were the fundamental reasons behind the satisfactoriness of the traditional methods.

The work of the Building Research Station was to apply scientific methods to the problems of the building industry, to test the new methods and new materials. For this purpose, resort was had to experiment under controlled conditions: the attempt was made to vary the conditions of the experiment in one way only at one time. This could be best done in a laboratory. But in the case of building it was always necessary, besides the work in the laboratory, to resort to the old method of trial and error.

An example of the work that the station is carrying out was illustrated by a map showing areas in which different types of lime are in use. The lecturer explained that one of these was the chalk area, another the blue lias area, and so on. Each of these lime-producing areas had its traditional method of producing lime from its own material. In one place if one wished to get the best out of the local lime one would have to drown it, in another one would have almost to burn it—he used these terms as a plasterer would: "drowning" meant using a surplus of water when slaking, "burning" meant allowing the whole mass to be very hot when one added water to it. But under modern conditions one got men and materials moving from one area to another, and, if a man went from one place to another, and was put in charge of a lime job, he might with perfect good faith use the local tradition to which he had been brought up; but that tradition would be perfectly useless with the strange lime to which he was applying it. Trouble of this sort had forced the station to study the lime problem, and on going into the laboratory it was found that there were optimum temperatures of slaking. One of the very best forms of lime should be slaked, if it were possible, almost at freezing point. The optimum temperatures were widely different, but could be laid down for specific types of lime, and, as a matter of fact, in new specification work advantage was taken of the research work at the station in this matter. He had not time to go into the whole of the lime question, but indications were being found of a real physical measurement behind what a plasterer would call his best mix. There seemed to be a kind of optimum consistence for any particular mix. A plasterer if left alone would reproduce that particular mix, and as far as could be seen at present it corresponded to a physical measurement.

There was a difficulty as to how on a job a lime was to be slaked at the optimum temperature. The plan we must adopt in this country was one that had been developed in America and had now been introduced here: we must try to get as much as possible of the preparation of building materials done as a factory job instead of being done on the site. In this case it would mean using hydrated lime. In this there was the possibility of a tremendous saving. A tradition had grown up of ordering lump lime and refusing to take the small. This was because if a big lump of lime was exposed to the weather it broke up into small pieces—these small pieces were hydrated, certainly, but very often they were carbonated, too, and therefore useless. There was a tremendous waste at the works due to smalls, but under proper hydration conditions all that lime would be utilised perfectly well.

Other matters which the lecturer dealt with were the research that had been made into breeze—as to why when used in concrete in some cases it swelled and in others shrunk—and the research that had been made into the weathering of brick and stone. A typical case shown was that of a limestone forming blisters on the surface as it weathered. A lantern slide of a micro-section of one of these blisters showed that the space behind it was empty. But the outer skin, the blister, was full of calcium sulphate. Apparently the blisters were formed by a real growth in the size of the skin of the stone. A pressure was developed in that way sufficient to tear away the skin from the main portion of the stone, and cause it to come up as a blister. When further investigation was made into this matter it was found that the forcing of the skin up in that way had opened up cracks in the stone. So the destruction went on. The way to prevent this particular form of decay was to prevent the skin forming, and this could be done by washing.

The weathering of the stone of the Houses of Parliament was referred to, as well as the fact that when a brick wall is repointed with Portland cement the pointing sometimes remains, but the bricks are gradually destroyed. Another part of the lecture treated of the work of the station on pozzolanas: here the endeavour was to get back to tradition and use lime instead of cement in mortar mixes. The ancient Romans had used potsherds and the like as an ingredient of their concrete and mortar, and this method had been copied. The co-operation of cement manufacturers and others interested had been sought, and research had been carried to the point where what was now wanted was that some of these pozzolanas should be produced commercially and put upon the market. Graphs shown on the screen indicated how much a mortar was strengthened by the addition of a pozzolana to the lime and sand.

Other matters dealt with were the classification of granites according to the effect upon them of temperature, and of sandstones according to the effects of moisture, and the elastic, shrinkage and creep movements of concrete and reinforced concrete.

Mr. Hope Bagenal, who moved a vote of thanks to the lecturer, said he had been asking himself whether architects as a profession welcomed knowledge. They welcomed ideas, but did they welcome the knowledge which should discipline those ideas at every point? Taking a few straws in the wind, he saw that architectural text-books were few and poor. But few architects read the Report of the Building Research Board for 1928. Knowledge for its own sake was not a strong point with architects. An architect trained himself by gradually forming accretions round some strong artistic interest, he collected information about his own problems, he surveyed the fields of science and archæology and took his own wherever he found it. Such was his nature, and it was not likely to change.

Sir Richard Allison, Dr. F. E. Smith and General Sir Sydney Crookshank also took part in the discussion, and the vote of thanks was heartily accorded.

National Museum of Wales.

The Cardiff City Council has decided to make a grant of £3,000 a year for the next seven years towards the building extensions fund of the National Museum of Wales. Alderman F. H. Turnbull, chairman of the Finance Committee, explained that with this grant the Corporation's total cash contribution would amount to £31,000, in addition to a valuable site and an annual rate in aid of a halfpenny in the pound.

ILLUSTRATIONS

PLATES

Board of Trade Offices.

In view of its topical interest, we illustrate this week Mr. E. Vincent Harris's original design for the proposed Board of Trade Offices, which was placed first in a competition held before the War.

The Soane Medallion.

Some critical comment on the R.I.B.A. Prizes and Studentships was given in our last issue. We illustrate this week the winning design for the Soane Medallion, by Mr. J. L. Martin (School of Architecture, Victoria University, Manchester).

Residence at Sevenoaks.

The site of this house is on the height of the Kentish Downs. The illustration shows a construction of 2-in. Tudor bricks with half-timber work, the timber for which was obtained from an old farm. Hand-made, sand-faced tiles have been used. The accommodation consists of a large hall going up two stories, with a bay window the full height of the two stories. There is a drawing-room, dining-room and boudoir, main and secondary staircases, kitchen and usual offices. On the first floor are two suites of bedrooms with bathrooms. In the lay-out there are two small wings to the house, with electrical plant on one side and a garden-house on the other side. At the entrance gateway there is a cottage for the chauffeur, coupled with the garage. The architect is Mr. W. Braxton Sinclair, F.R.I.B.A.

Design for an Anglo-Catholic Church.

This church is designed on an unusual site, for Anglo-Catholic rites, the side passages allowing the choir to walk in procession. The altar is so placed as to be seen from any part of the church occupied by the congregation. Mr. T. Carr, A.R.I.B.A., is the architect.

Australian National War Memorial, Villers-Bretonneux, France.

The entrance pavilions shown in the foreground of this illustration were designed by Sir Edwin Lutyens, R.A., and are now in course of erection. The architect for the memorial is Mr. William Lucas, whose competitive design was placed first by Sir Giles Scott, R.A. Detailed working drawings to the satisfaction of the Imperial War Graves Commission have been in the hands of the Federal Government for fully twelve months, whilst some six months ago a decree was signed by the President of the French Republic approving of the erection. The memorial is to be in Australian trachyte, prepared in the Commonwealth ready for erection in France.

House at St. Merryn, Cornwall.

The walls of this house are whitewashed brick, and the roof is of green Delabole slate. The casements are of metal, painted white. There are five bedrooms and two sitting-rooms, and a garage for two cars, and an Aerogen lighting plant is installed. The architect is Mr. C. Cowles-Voysey, F.R.I.B.A. The house has been designed for Mr. W. I. Gunn.

New London Arcades.

These new arcades, which have been lately completed, are described in an article given on page 184.

"Somerset House," Reading.

The illustration which we give shows the main front of this new building, facing on to Blagrave-street, Reading, the main entrance being opposite the Reading Town Hall. The building will occupy an important site, which at present is covered with a drab corner building having advertisement hoardings on either side, and is to be erected for Mr. H. G. Blagrave, the owner of the Blagrave Estate, which comprises a large portion of the centre of Reading, of which the site forms a part. The building will be erected from the designs of Major F. G. Sainsbury, L.R.I.B.A., F.I.A.A., M.I.Str.E., of Reading and London, and the work will be carried out by Messrs. Wheeler Bros. (of Reading), Ltd

The elevations will be faced with multi-coloured hand-made bricks with cast Portland stone dressings, and the roof slopes will be covered with green Westmorland slates. Internally the building will be equipped with an "Express" lift, and centrally heated by radiators, while a separate system will be installed to give a constant hot water supply to all cloakrooms. Electric lighting will be installed throughout, with separate meters to each suite of offices, and a heating plug placed in each room.

The staircase will be constructed of cast stone, corridors paved with Terrazzo, while the floors of all cloakrooms and lavatories will be laid with Doloment. The ventilation of the building will be by means of air ducts with extract grilles to each room, the foul air being taken off through the ducts, which will be fitted with extract ventilators above the roof level. The finishings to the vestibule and lift hall will be in oak. All shop fronts will be glazed with plate and leaded light glazing in hardwood frames covered with drawn bronze metal sheeting.

The accommodation will comprise heating chamber, fuel stores and strong-room spaces in the basement, and the ground floor will consist of lock-up shops and offices, while provision has been made for 47 offices on the first, second and third floors inclusive, in addition to caretaker's quarters, consisting of sitting-room, two bedrooms, kitchen, bathroom and usual offices.

Prudhoe Hall Colony for Mental Defectives.

This colony was originally arranged for and carried on by a combination of the Boards of Guardians in the counties of Northumberland, Cumberland, Durham and the North Riding of Yorkshire. The Mental Deficiency Act has, however, since come into force, and the colony has now been purchased by the County Boroughs of South Shields, Sunderland, Darlington, West Hartlepool, Middlesbrough and Tynemouth. At the present time there is accommodation for from 600 to 700 patients, and this is easily capable of extension with the present administration buildings to three times as many and as many more as required in the future. The colony is planned on the "segregate" or village arrangement, which is economical in construction and advantageous both for patients and those who are responsible for administration, the most important advantage being the greater facilities afforded for classification.

The site is situated in the picturesque Tyne valley, partly in Northumberland and partly in Durham, about eight miles from Newcastle-upon-Tyne, on the main road between this town and Carlisle. It is of a pleasant and undulating nature and well wooded. The buildings have been placed in the centre of the park-like grounds of a substantial mansion erected in 1868 by the Liddell family. The mansion house itself is now used as an administration centre, and in addition there have been erected hospital, power station, workshops, bakery, central kitchen, general stores, washhouse and laundry, these being grouped comparatively close together, with the boiler house adjoining, from which steam is supplied to them.

The estate is divided across the centre by a private roadway from the east lodge on the Carlisle-road to the west lodge on the Greenside-road, some mile and a half long, and near the eastern portion are arranged the men's village and industrial buildings.

Further to the west, on the south of this road, is the adminstration centre, and on the north of this is arranged the women's village with industrial buildings. Encircling the north boundaries of the west park is arranged the children's village and open-air school. Greenhouse, hothouse and very ample kitchen gardens are placed in the most suitable positions, and provide as well as work for the patients almost the whole of the produce required for the colony. A large recreation hall with cinema and stage for theatrical entertainments and dances has also been provided.

The engineering system consists of an underground subway connecting the power station with the three villages for men, women and children, in which are contained the electric mains, heating and hot and cold water and steam supplies and telephones, all fed from the central pumping plant in the power station.

The patients are disposed in separate self-contained homes or villas, with accommodation for from 40 to 60 patients in each home. The homes comprise large day sitting-rooms, dining-rooms, bedrooms, and the necessary ablution and sanitary conveniences. The permanent buildings are erected in reconstructed stone from materials found on the site. The roofs are covered with Westmorland green slates. The buildings are not laid down with any regularity, and both in design and material variety is imparted to them. None of the rooms in the homes is under lock or key, and even the main approach to the colony itself is without gates or enclosures. The patients are permitted to move freely about the buildings and surrounding grounds, the conditions prevailing being more or less what their own home conditions might have been.

The entire scheme has been designed and the buildings carried out under the supervision of the architects, Messrs J. H. Morton and Son, FF.R.I.B.A., and J. G. Burrell, the general contractors for the work being Messrs. Harold Arnold and Son, Ltd. The engineering arrangements in the colony have been carried out under the supervision of Messrs. David Balfour and Son, consulting engineers, by the Brightside Foundry and Engineering Co., Ltd.

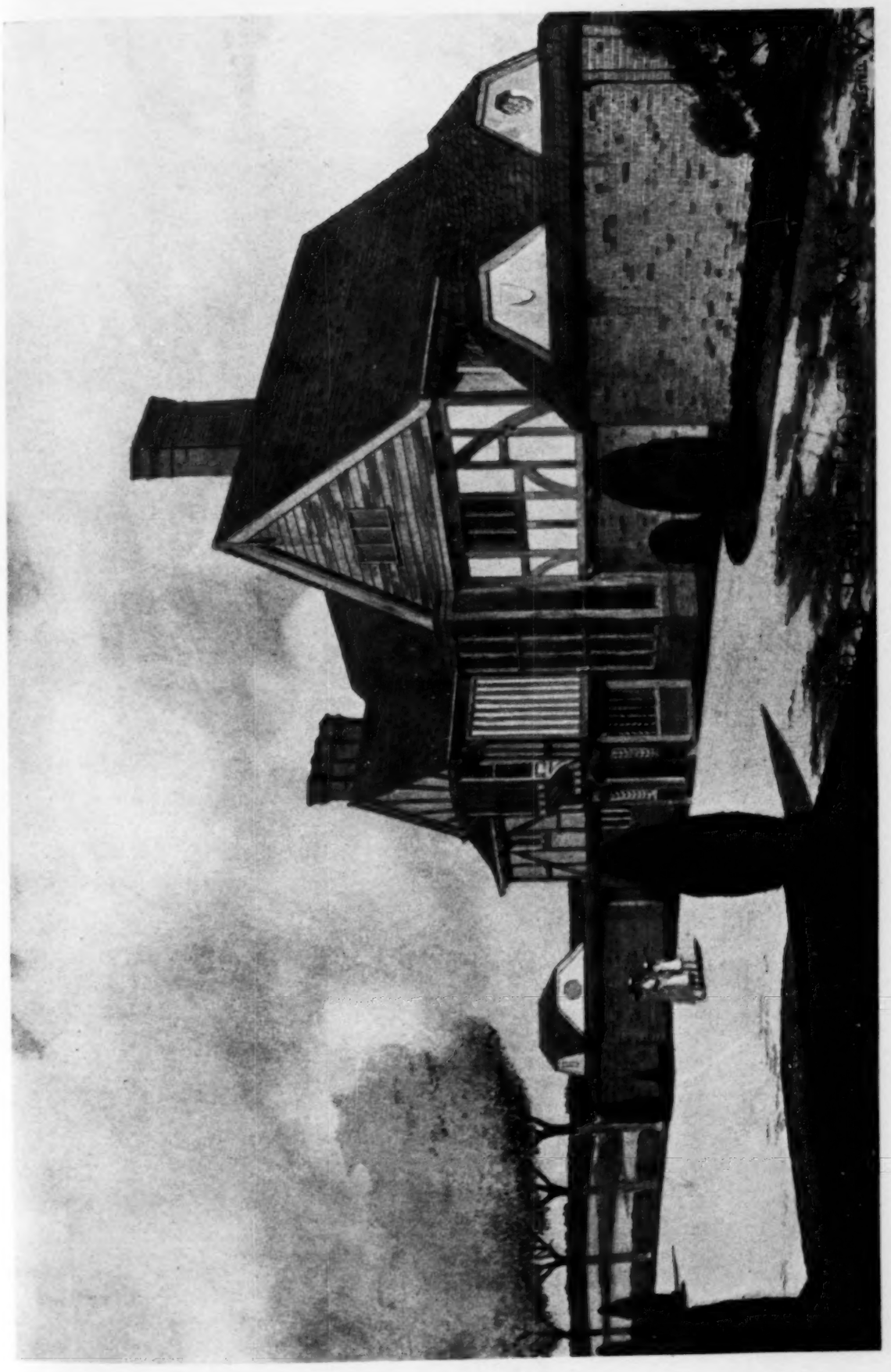
OBITUARY

Sir Lawrence Weaver.

We regretfully record the death of Sir Lawrence Weaver at his home at St. John's Wood, on Friday last, after two days of illness. Born in Bristol in 1876, Lawrence Weaver was educated at Clifton, and afterwards was trained as an architect. He never practised, as when he had served his articles he went into business and rose to be manager and director of various manufacturing and contracting firms. Later, he turned to journalism, but when war broke out he joined the R.N.V.R. Anti-Aircraft Corps as an able seaman, and in 1917 was made Controller of Food Supplies in the Food Production Department, later becoming Commercial Secretary at the then Board of Agriculture. At the end of the war he was Director-General of the Land Department and Second Secretary of the Ministry of Agriculture.

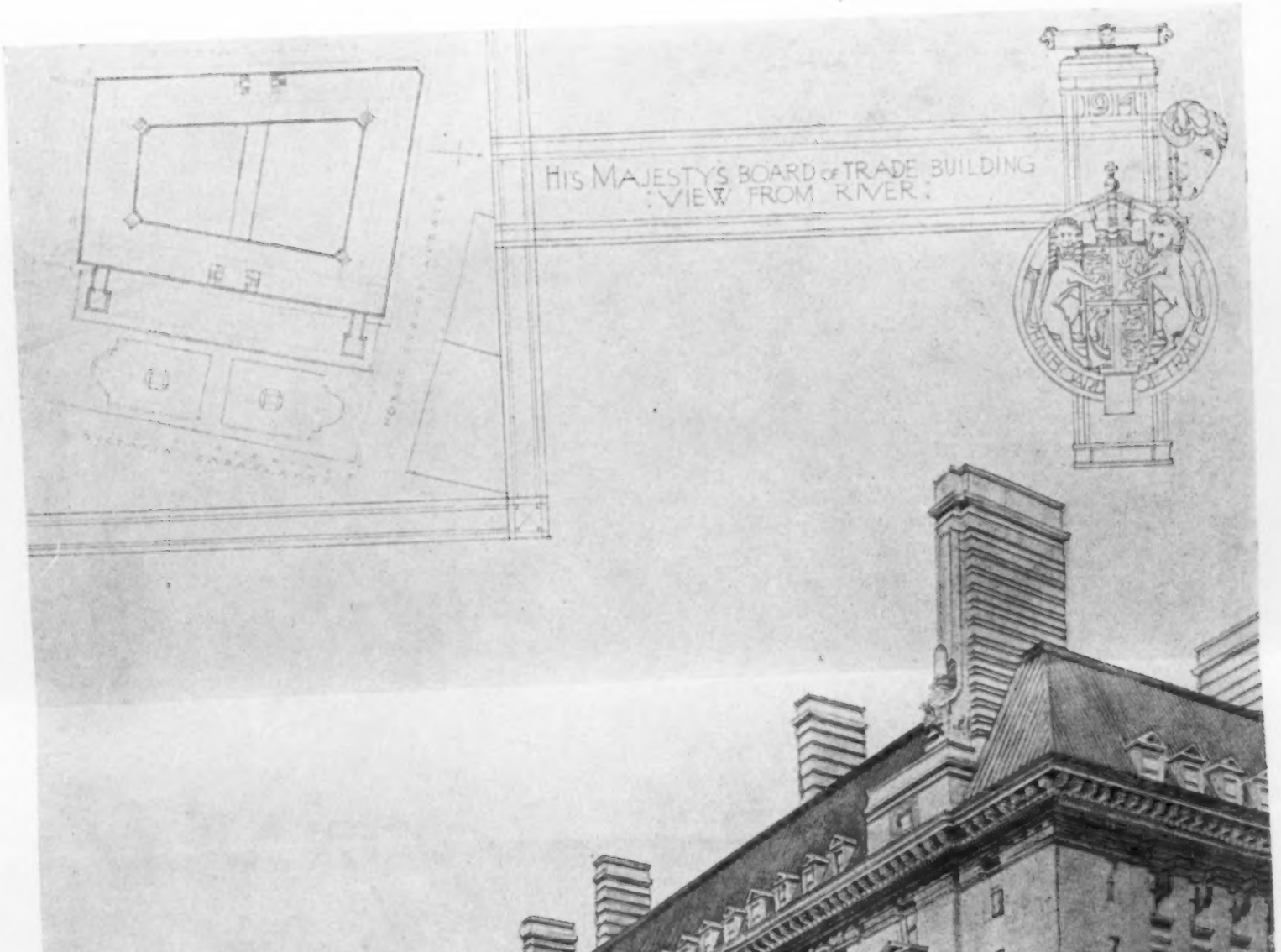
When the British Empire Exhibition was in course of preparation at Wembley, Sir Lawrence was entrusted with the task of supervising the selection and assembly of the exhibits representing the United Kingdom. Even in this work wherever possible he refused to let bad art be introduced. At Wembley Sir Lawrence was responsible for the letting of the vast areas of the Palace of Industry, the Palace of Engineering and the lakeside sites. Sir Lawrence believed that the art schools should be centres to which manufacturers might go for guidance and artistic suggestions, which would make their products more acceptable to the public.

He was knighted in 1920. He was an Honorary Associate of the Royal Institute of British Architects, a trustee of Chequers and the Douglas Haig Memorial Homes, and founded the National Institute of Agricultural Botany. He was also President of the Architecture Club. Among his publications are works on the Royal Scots, Sir Christopher Wren, Exhibitions and the Arts of Display and Traditions and Modernity in Plaster Work.



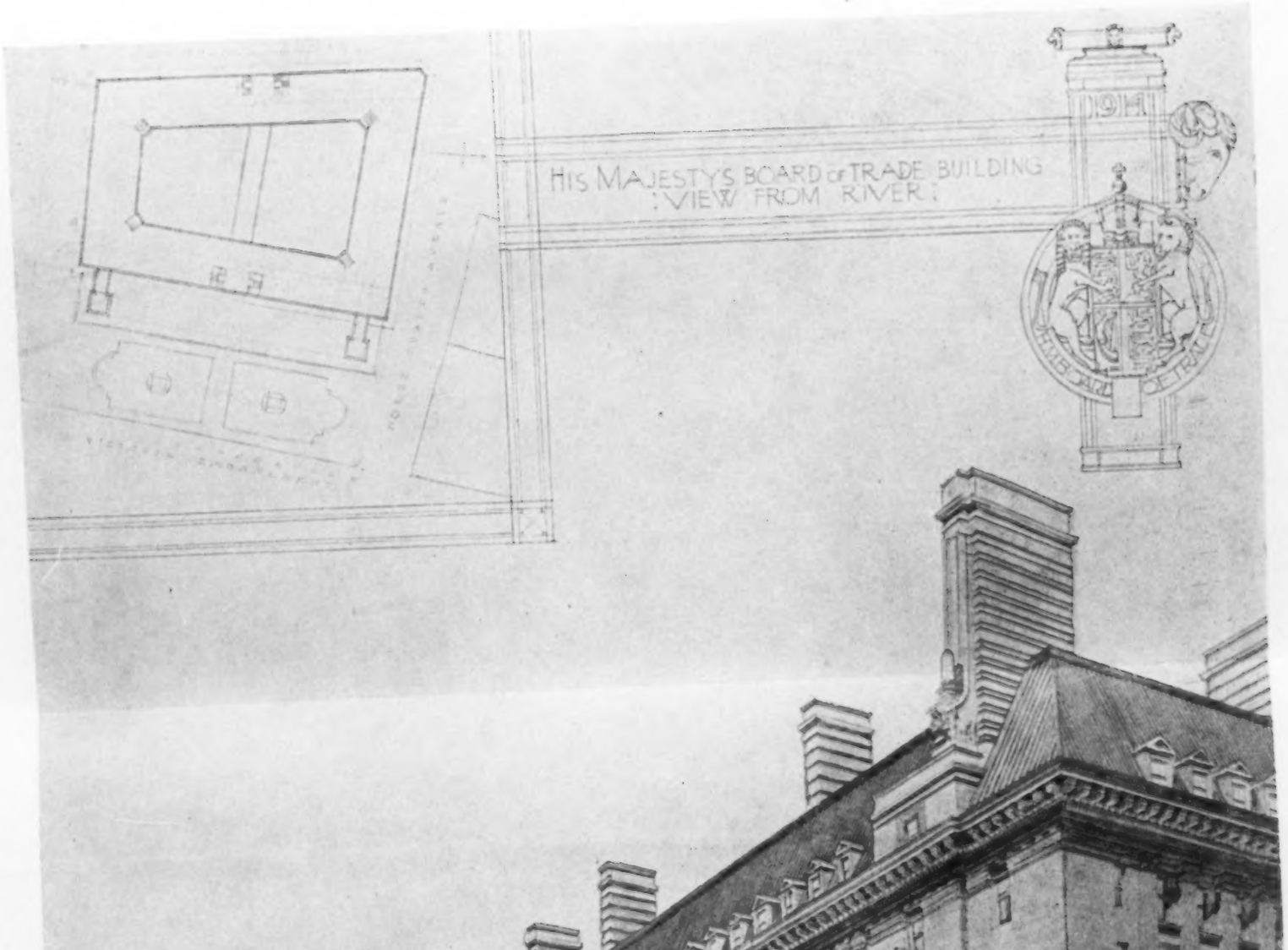
House at Sevenoaks, Kent.

Mr. W. Braxton Sinclair, F.R.I.B.A., Architect.


HIS MAJESTY'S BOARD of TRADE BUILDING
VIEW FROM RIVER

Original Competition Design for Proposed Board of Trade Offices, Victoria Embankment : River Frontage.

MR. E. VINCENT HARRIS, Architect.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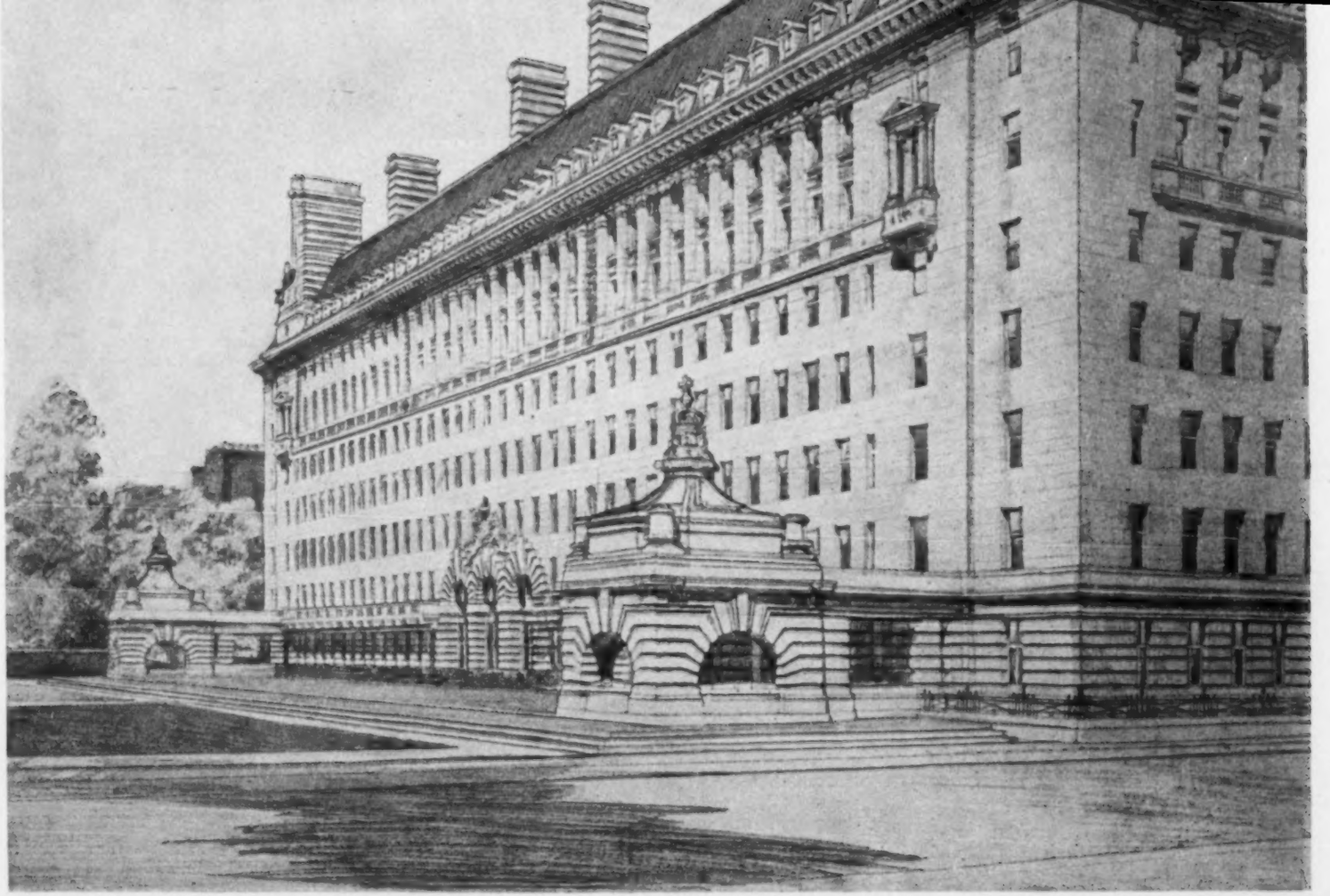

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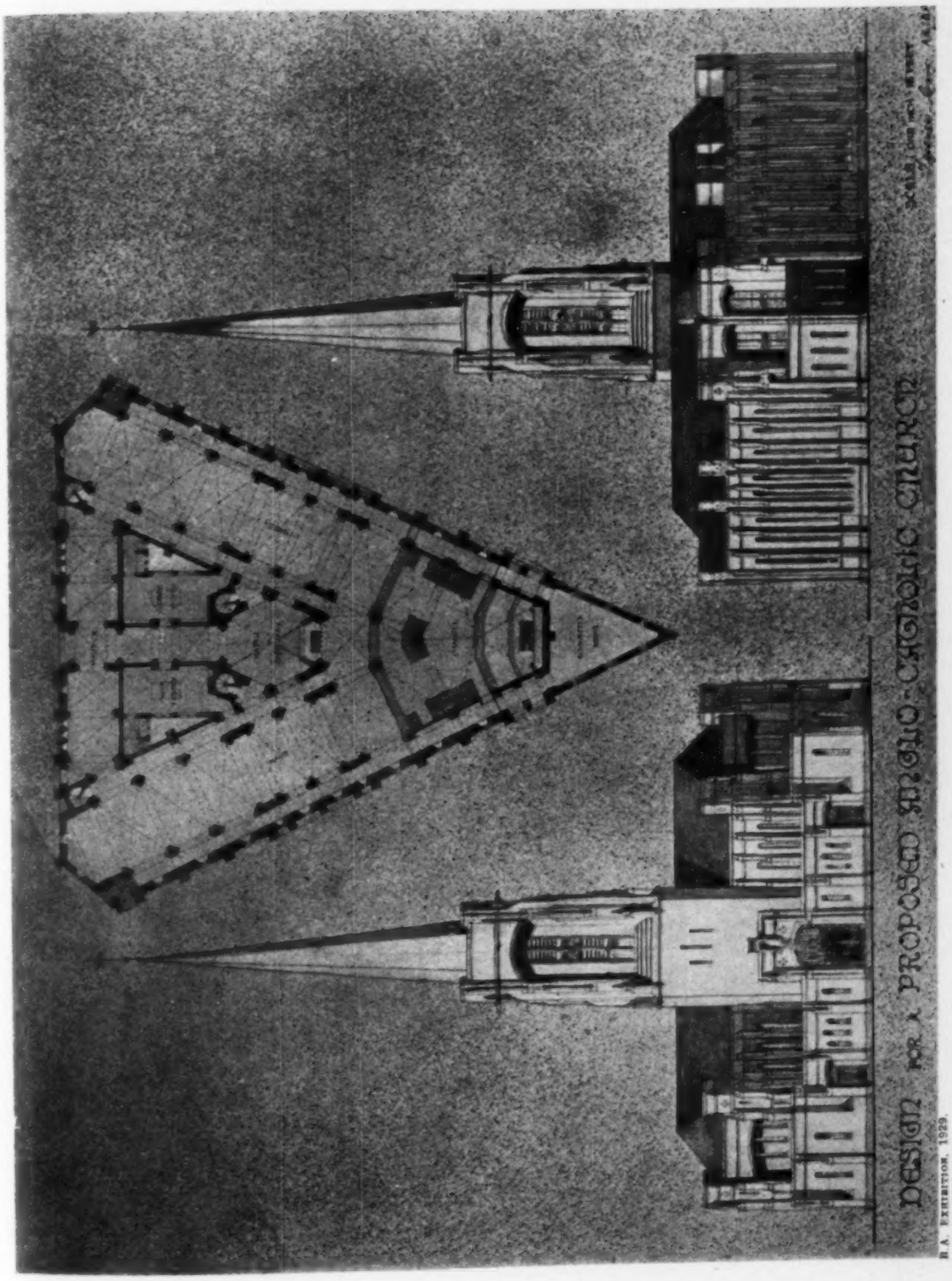
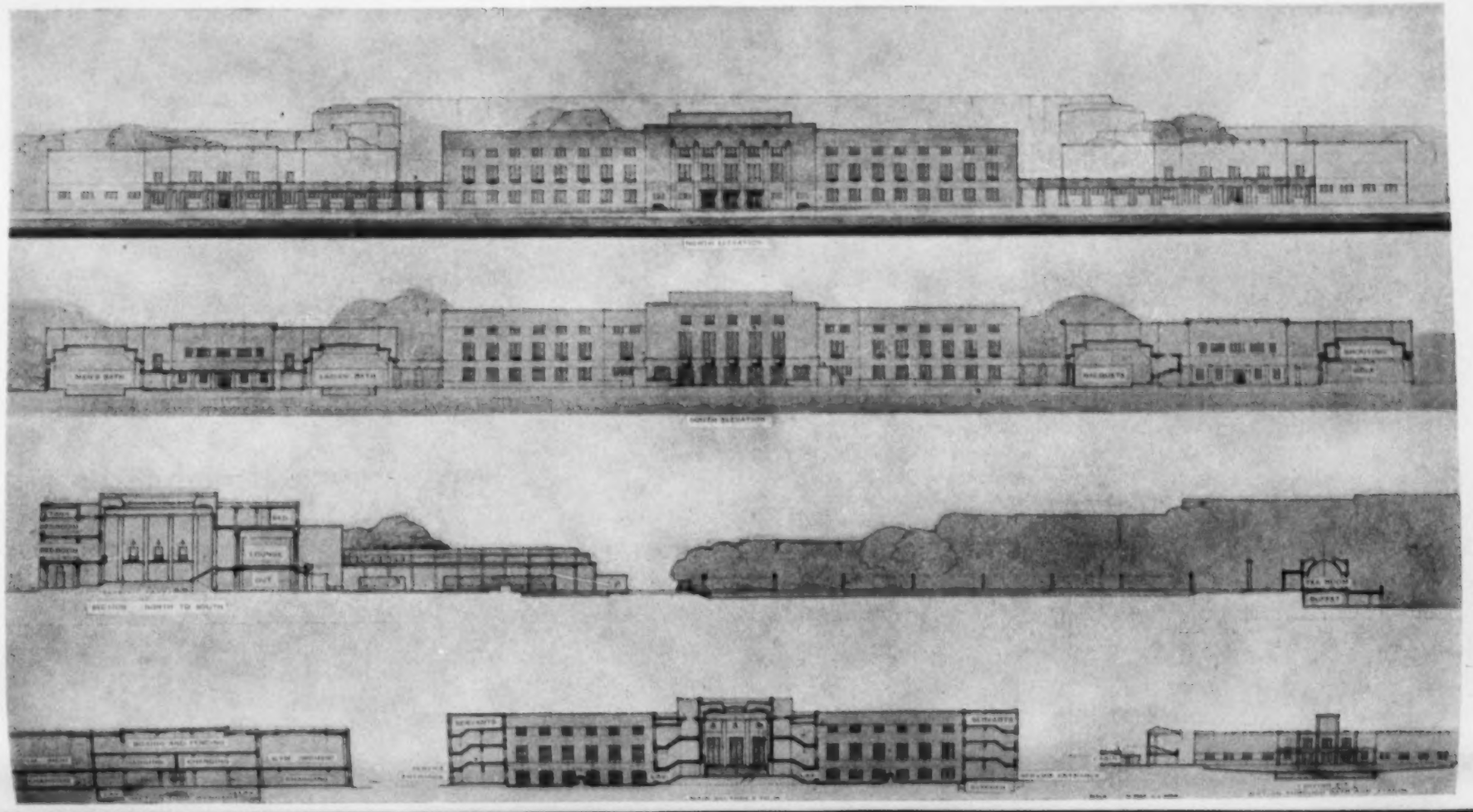
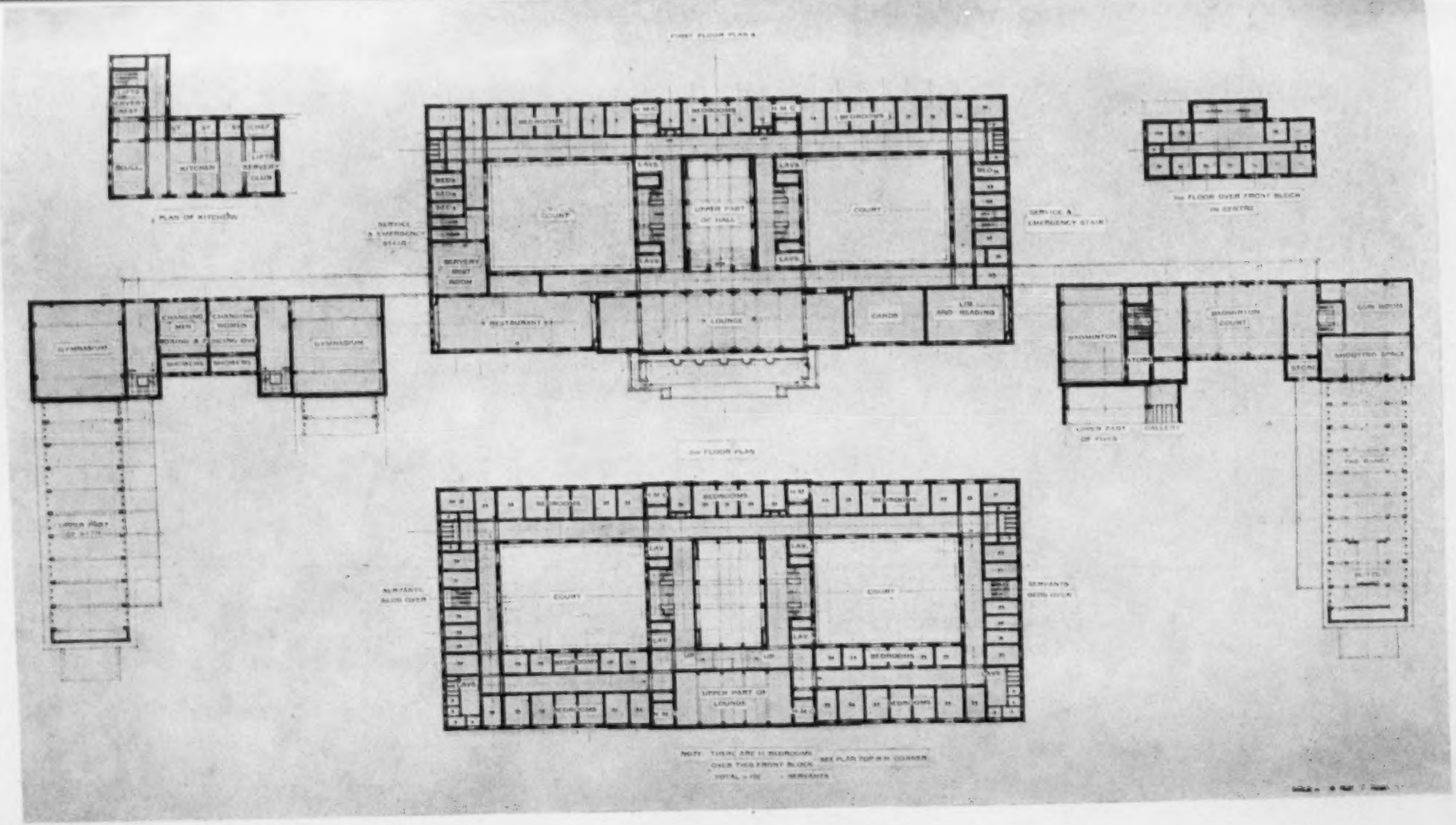


Design for an Anglo-Catholic Church.
By Mr. Terence Cabe, A.R.I.B.A.

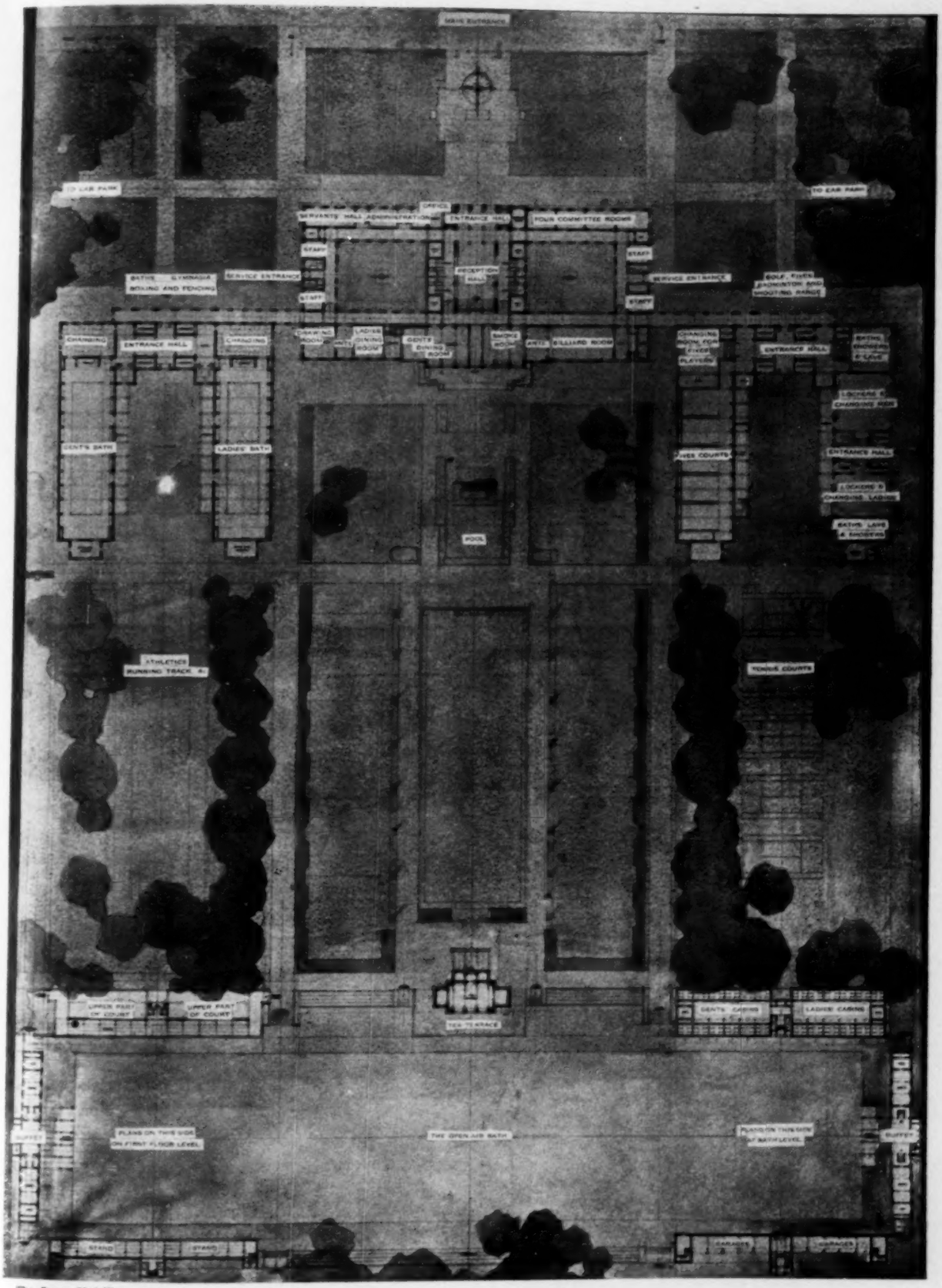




The Soane Medallion.

A Sports Club : Winning Design.

By Mr. J. L. Martin (School of Architecture, Victoria University, Manchester).



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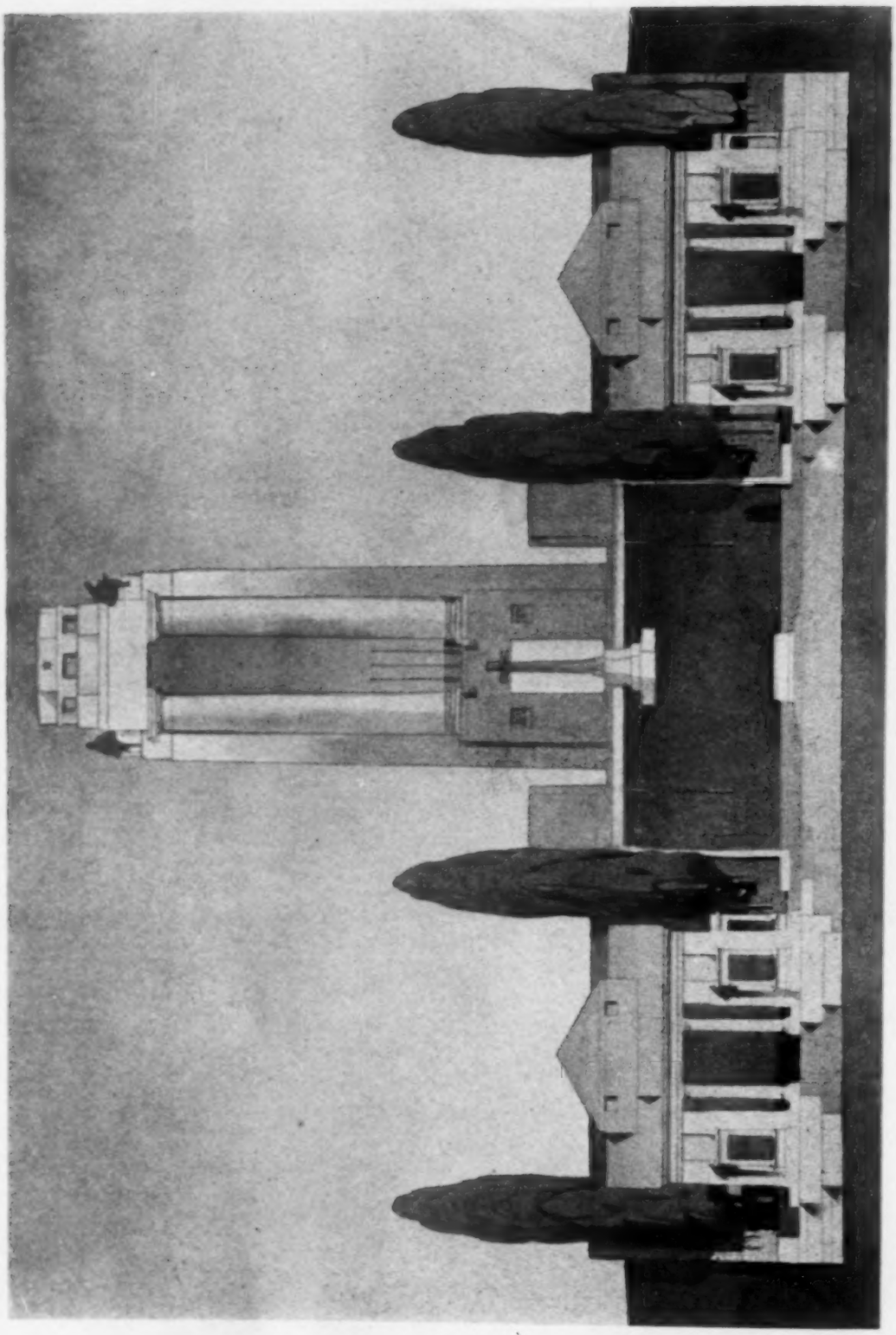
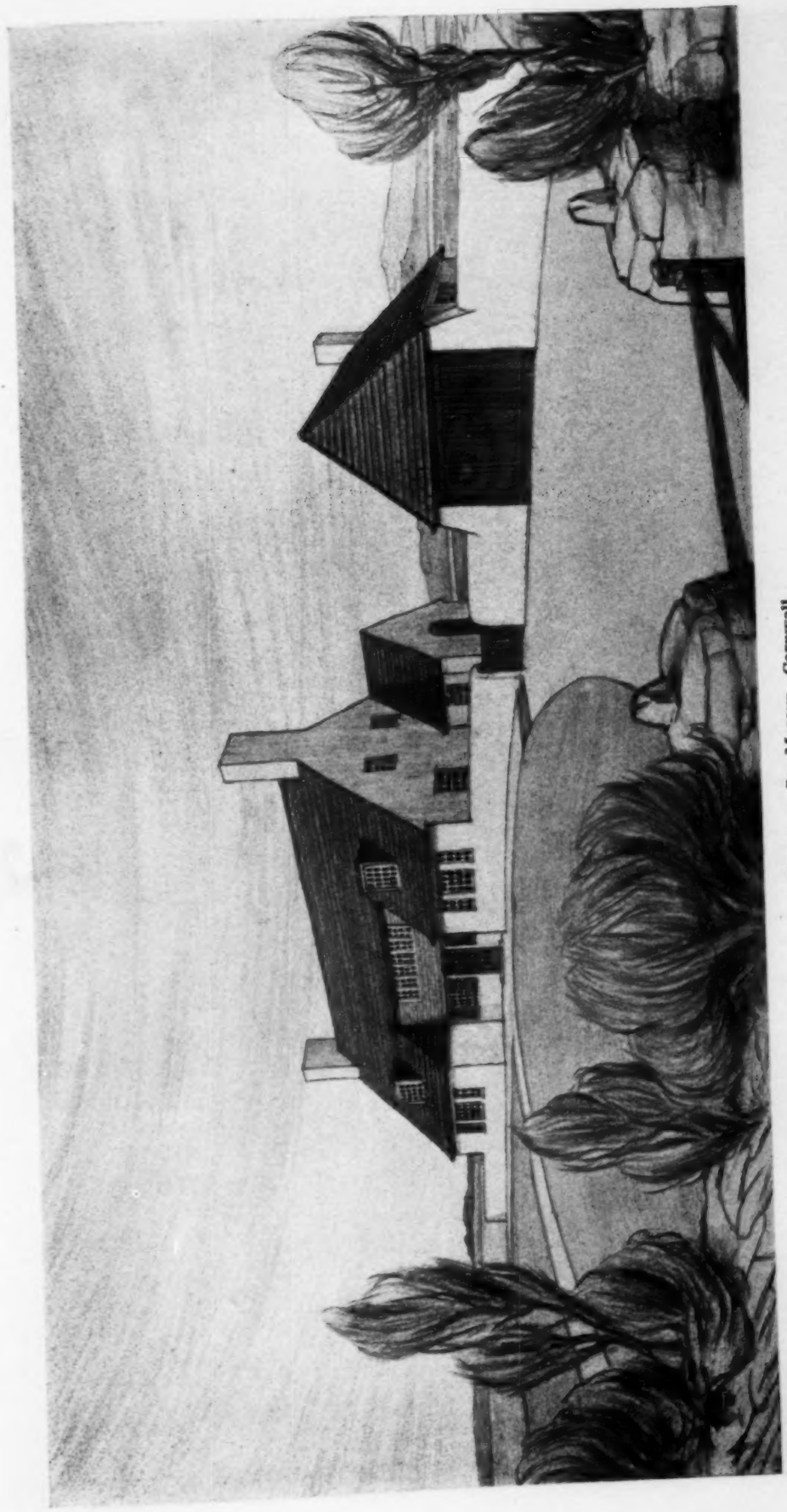


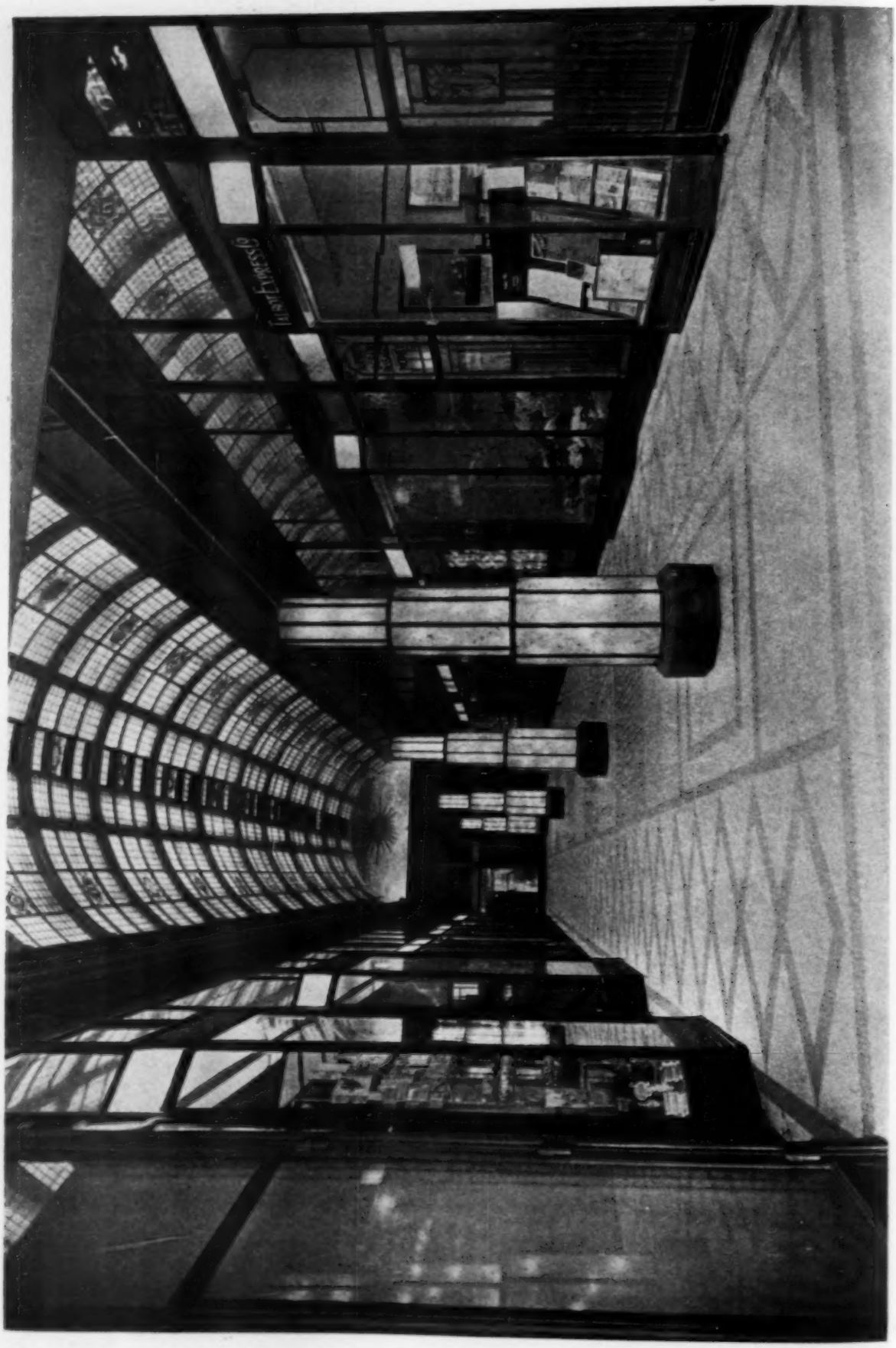
Australian National War Memorial, Villers-Bretonneux, France.

Mr. William Lucas, Architect. Entrance Pavilions designed by Sir Edwin Lutyens, R.A., F.R.I.B.A.



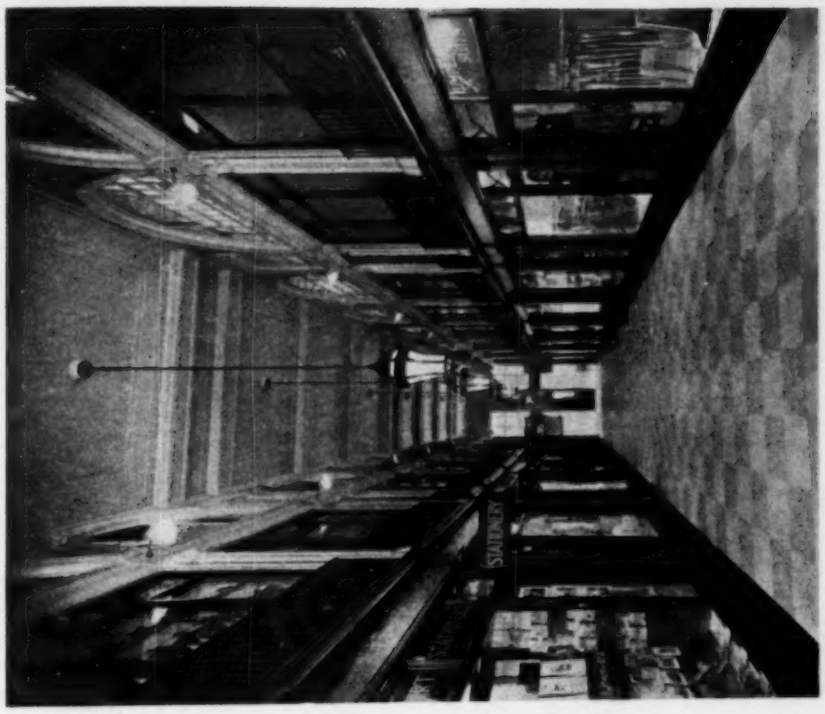
House at St. Merryn, Cornwall.

Mr. C. Cowles-Voysey, F.R.I.B.A., Architect.

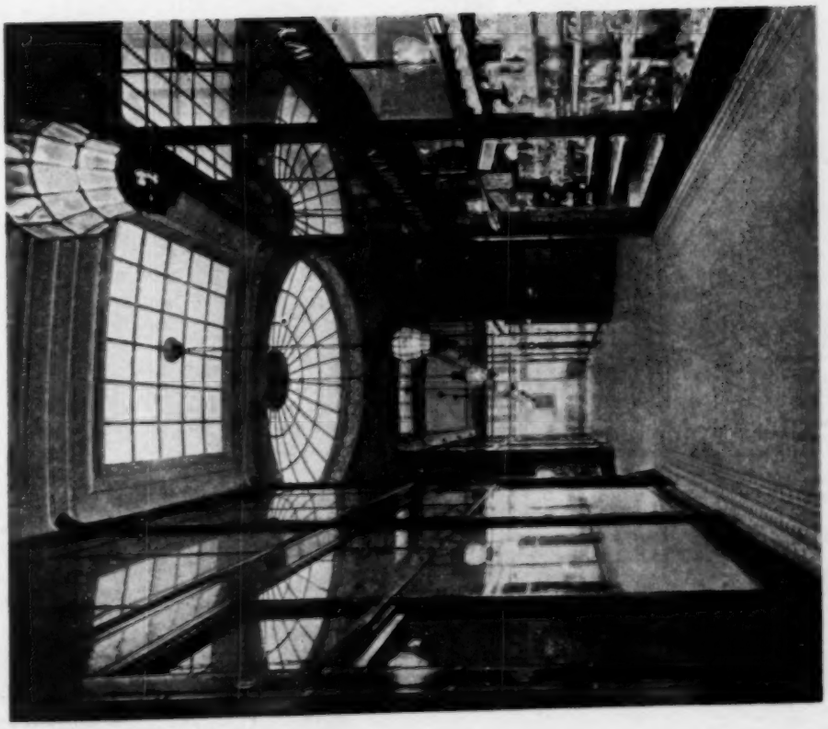


The Grand Arcade, Charing Cross.

Messrs. M. E. and O. H. Collins, FF.R.I.B.A., Architects.



THE QUADRANT ARCADE.

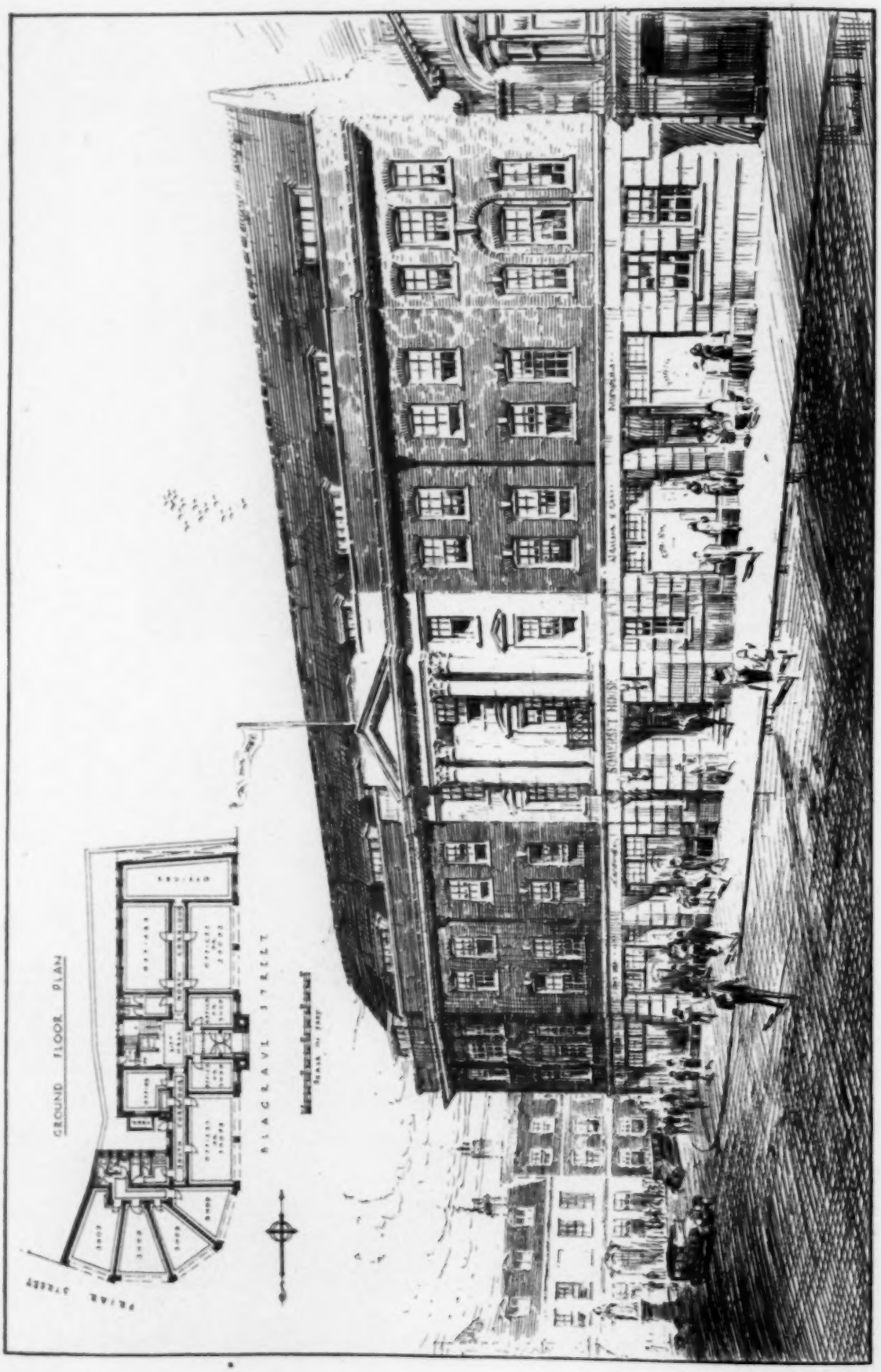


THE REGENT ARCADE.

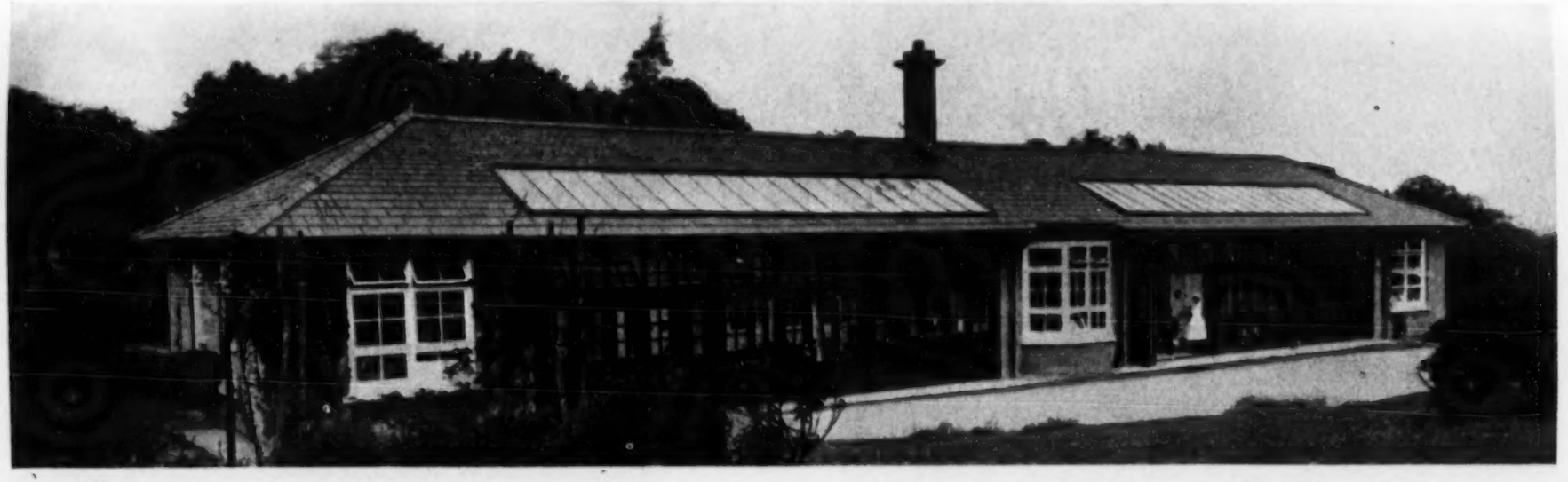
Two New Arcades in Regent Street, W.

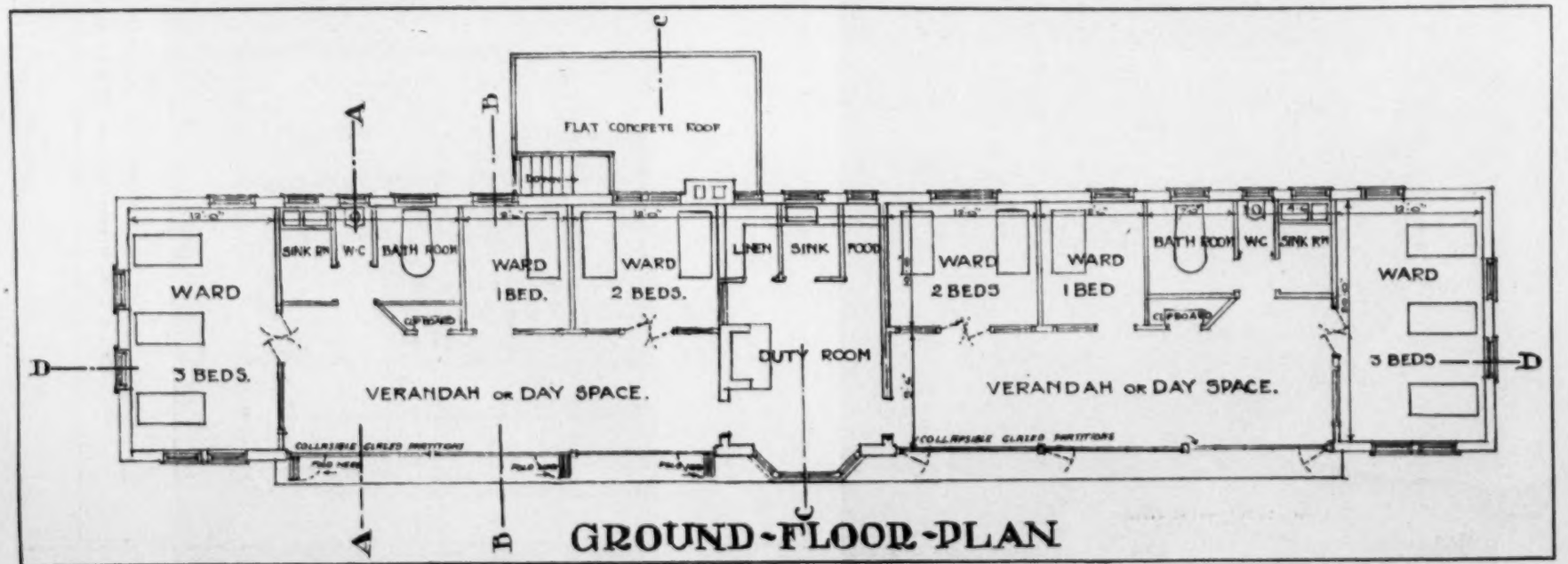
MR. GORDON JEEVES, F.R.I.B.A., Architect.

MESSRS. M. E. AND O. H. COLLINS, FF.R.I.B.A., Architects.



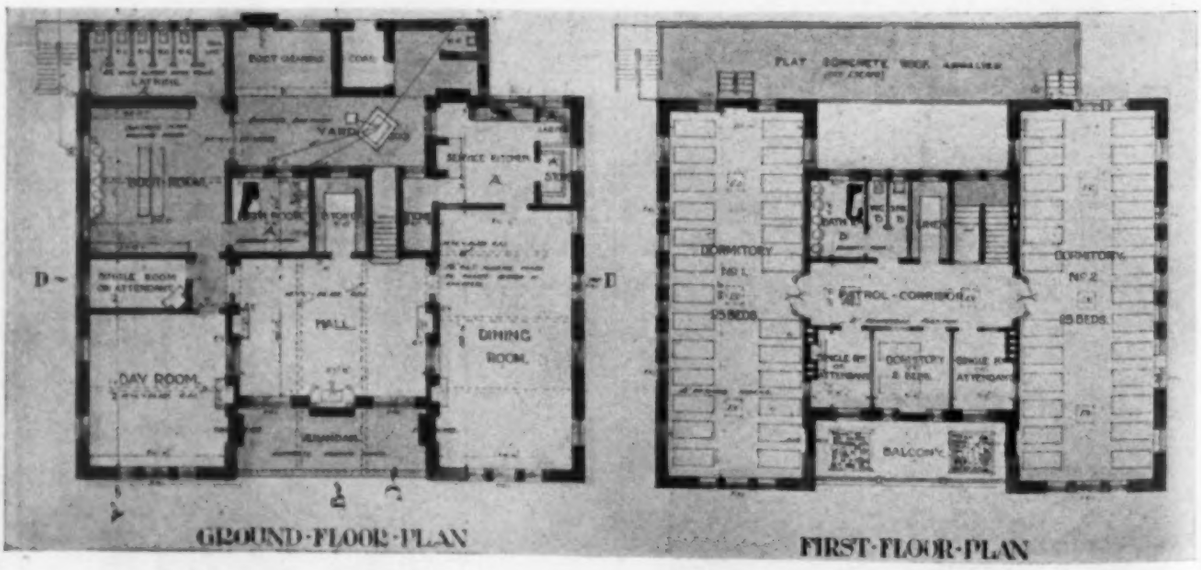
"Somerset House," Blagrave Street, Reading.
Mr. Frederick G. Sainsbury, L.R.I.B.A., Architect.





Prudhoe Hall Colony for Mental Defectives: Hospital. Messrs. J. H. Morton and Son, FF.R.I.B.A., and J. G. Burrell, Associated Architects.

A Typical House.



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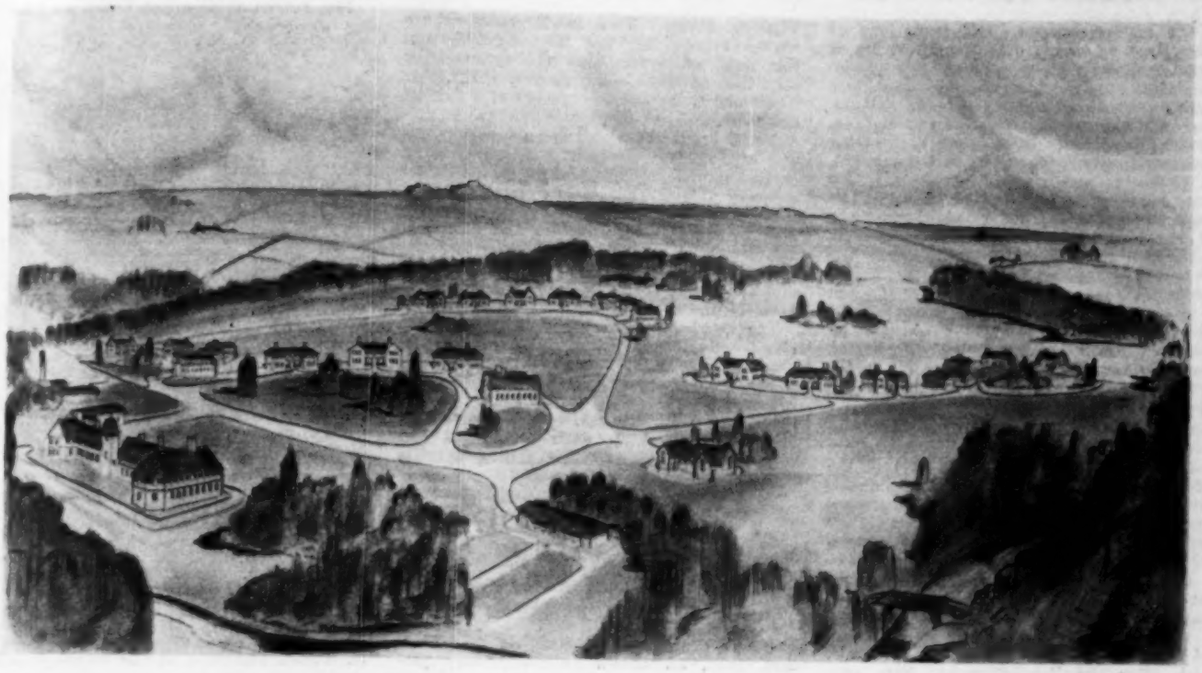
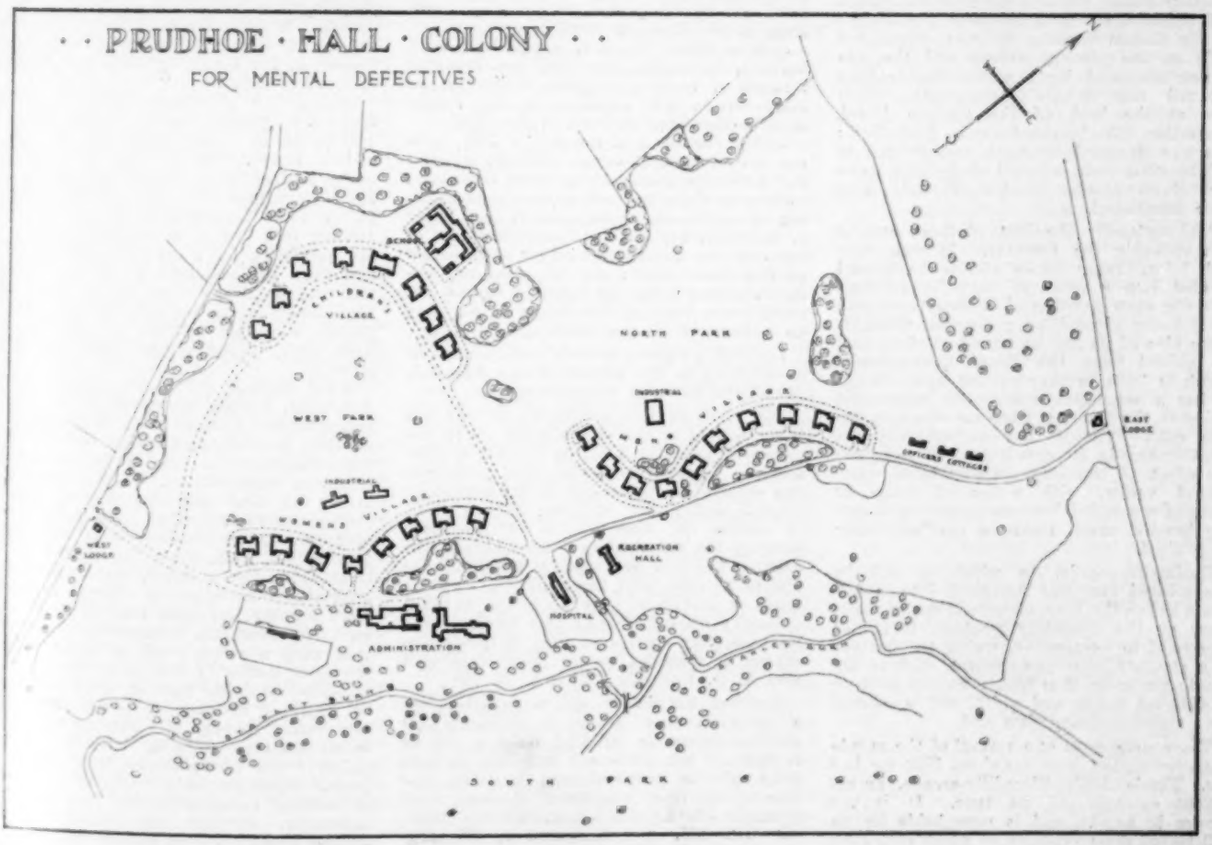
Messrs. J. H. Morton and Son, FF.R.I.B.A., and J. G. Burrell, Associated Architects.



A Bird's-eye View.



General Lay-out.

Prudhoe Hall Colony for Mental Defectives.

Messrs. J. B. Morton and Son, FF.R.I.B.A., and J. G. Burrell, Associated Architects.

THE REVIVAL OF THE ARCADE

That history repeats itself is as true of architecture as of any other manifestation of human activity. About a hundred years ago the latest architectural novelty in this country was the shopping arcade. To-day there is a widespread revival of this feature. Several new arcades have lately made their appearance in London, others in the suburbs, the provinces and at seaside resorts. The reason for this revival is not far to seek. The arcade has many practical advantages. From the shopping aspect it provides welcome shelter in winter and summer, while from the point of view of the building owner it is a highly profitable investment, for within the space normally occupied by two or three ordinary shops, with their rear accommodation, it is possible to build an arcade having a score or more small shops, according to the depth of the site.

Precedent for the covered shopping centre may possibly be traced in the Piazzas of Covent Garden and earlier examples of covered ways, but it is significant that the sudden popularity of the arcade in this country during the early years of last century coincided with the close of the Napoleonic Wars, when large numbers of English people, including no doubt many architects, crossed to Paris, eager to see the improvements that had been carried out by Napoleon. These visitors would have been impressed by the many fine *Passages* they saw there and by the piazzas of the Palais Royale, which after the Revolution had been converted into a series of small shops.

Several arcades shortly made their appearance in London. First there was the Burlington-arcade, between Piccadilly and Burlington-gardens, built about 1820 from the designs of Samuel Ware; then came the Lowther-arcade, running between the Strand and Adelaide-street, built from the designs of Sir Robert Smirke (it was demolished early in the present century and the site is now occupied by Coutts's Bank); then followed the Royal Opera-arcade, which runs at the back of the Carlton Hotel, connecting Charles-street with Pall Mall: this was designed by Nash and Repton in collaboration; and a good deal later came the Exeter-arcade in the Strand, long since demolished.

Architecturally the best of these arcades was probably the Lowther. It was wide and lofty, being three stories high, and divided into a series of bays by pilasters carrying open vaulting of Roman type, each vault being pierced by a circular skylight. Some idea of its fine architectural effect may be gained from the Royal Opera-arcade, which is built in very similar style, though it has a somewhat unbalanced appearance owing to the fact that there are shops on one side only. Though not so lofty as the Lowther-arcade, it is well proportioned, and the effect of the long perspective of open-topped vaults, with a central range of lanterns suspended between gracefully drooping bracket arms, makes a very attractive *coup d'œil*.

Burlington-arcade, to which it will be remembered Professor Beresford Pite, a few years before the War, added a dignified upper story on the Piccadilly frontage, is not so successful in perspective, owing to the lack of a strongly repetitive element, such as the vault; moreover, it is broken up into sections of different height and width, and is covered by a rather ordinary glass roof.

There were signs of a revival of the arcade even before the War, for about 1912 we had Mr. Thrale Jell's Piccadilly-arcade, an excellent example of its type. It is two stories in height, and is remarkable for its tall bowed glass windows, of which each shop has two, divided by an entrance doorway with carved pedimental feature and fanlight over, surmounted by a wrought-iron balcony. The roof is segmental with two large openings for lighting.

Three new arcades have been lately completed in Regent-street, while another has been built under the old Grand Hotel at Charing Cross. Two in Regent-street are named respectively the Regent-arcade and the Quadrant-arcade, and the architect in each case is Mr. Gordon Jeeves, F.R.I.B.A. The third is the private venture of a firm of outfitters. The Regent-arcade accommodates 20 small shops and is an excellent example of modern design in metalwork, being carried out mainly in bronze with decorative strips of blue enamel. Two stories in height, it is lighted by a central circular saucer dome, and by two smaller rectangular openings. Attractive features of the arcade are the glass and metal "pelmets" to the entrance, and the series of well-designed lanterns for artificial lighting.

The Quadrant-arcade also provides twenty shops and is equally attractive, though designed on more conventional architectural lines. It is three stories in height, pairs of pilasters of "Colonial" proportions dividing one shop from another. The ground-floor story is painted in dark green and the upper stories cream. The ceiling consists of a series of shallow coffers, and lighting is by a range of well designed lanterns.

The arcade at Charing Cross, an interesting example of modernist design, has a right-angled change of axis, and consists of a short and a long "arm," the former entered from the Strand and the latter from Northumberland-avenue. The long "arm" has a semi-circular glass roof, relieved by a series of stained-glass panels of heraldic design, the lunettes at either end having painted decorations of cloudscapes flood-lighted. The short "arm" has a flat ceiling relieved by a panel of decorative plaster-work. The arcade is two stories in height, the shop fronts being carried out in metal-work, the doorways consisting of decorative ironwork of modern type, attractively designed. Effective use is made of modern glass panels for lighting the shop windows, other lighting being provided by a series of standards down the centre of the arcade, cased with modern glass. The glass "pelmets" at the entrances are also an attractive feature of this arcade. Messrs. M. E. and O. H. Collins, FF.R.I.B.A., are the architects.

BUILDING PRACTICE—II.

By W. T. CRESWELL, Barrister-at-Law, Hon. A.R.I.B.A., Associate (late Fellow), Surveyors' Institution, etc.

BUILDING AND IMPROVEMENT LINES.

Under Section 155 of the Public Health Act, 1875, an urban authority may prescribe the future building line of any house or building situated in a street and which has been or is about to be taken down (that is, *substantially* taken down) with the intention of rebuilding or altering the same. The local authority in this instance must pay compensation for any loss or damage sustained by the person immediately interested in the house or building.

Section 156 of the Act, which dealt with building lines and prevented the bringing forward of buildings beyond others in the same street, was repealed by the Public Health (Buildings in Streets) Act, 1888.

Under Section 3 of the Act of 1888, it is not lawful in any urban district, without the written consent of the urban authority, to erect or bring forward any house or building in any street, or any part of such house or building, beyond the front main wall of the house or building on either side thereof in the same street; nor to build any addition to any house or building beyond the front main wall of the house or building on either side of the same.

For the purposes of this section a house or building at the corner of two streets is considered to be in both streets.

The effect of this enactment is that the building line of any street is set up by the owner of the first building erected in that street. Subsequently, the local authority can enforce the provisions of the section in respect to any new building. There must, of course, be some degree of proximity between the proposed new building and the existing building or buildings adjoining the site to be used, and the adjoining building must be looked at as a whole by the local authority when enforcing this section. For instance, any species of wing or projection cannot be regarded as the front main wall (see A. G. Edwards (1891), 1 Ch. 194).

Further, the section applies equally when a proposed new house or building has another house or building on one side of it only. When there are buildings on both sides of the proposed new building, the line of the *least* prominent of these must prevail. (See Leyton L.B. v. Causton (1893), 57 J.P. 135, and Anderson v. Richards (1906), 70 J.P. 231.

It should be noted that the Act of 1888 deals with *new buildings only*, but it should also be noted that *temporary buildings* approved under the Public Health Act, 1907, come within its provisions. Amongst other things, a wooden shed intended for use as a stable, a photographer's advertisement case erected in a front garden, a modern building on wheels stationed at the corner of a new street and used as a butcher's shop, have been held variously to be new buildings.

A county council or highway authority obtains its powers to prescribe a building line on any highway maintainable by it from the Roads Improvement Act, 1925, and must pay compensation to any person whose property is injured by a building line being defined. When a building line is prescribed under this Act, it is unlawful, without the consent of the authority concerned, to build in front of that line.

Beyond the provisions above mentioned, there is no power whereby a local authority may prescribe a building line in the case of a new street, nor can one be prescribed under section 157 of the Public Health Act, 1875, by means of a by-law. If, however, as in some localities, a street has been already laid out in accordance with a by-law providing for a certain width of street less than the standard width on condition that the buildings shall be set back, then that condition is not only binding on the person who laid out the street, but also upon every other person building in the street.

With Section 160 of the Public Health Act, 1875, certain provisions of the Towns Improvement Clauses Act, 1847, are incorporated; and amongst others is a provision for improving the line of the streets and removing obstructions. After service of notice the local authority may recover the cost of the improvement from the owner or occupier. Under Section 33 of the Public Health Act, 1925, if, in the opinion of the local authority, a street, repairable by the inhabitants at large, is without any sufficient regular boundary line, or if the local authority considers it necessary or desirable that such a street shall be widened, then the local authority may prescribe either in relation to either side of the street or at or within a distance of fifteen yards from any street corner, the line to which the street shall be widened. This line is then called "the improvement line," and any person whose property is injuriously affected is entitled to compensation from the local authority. Further, any person aggrieved by the prescription of such an improvement line may appeal to Quarter Sessions against its encroachment on his interests. Once the improvement line has been prescribed, no new building, erection or excavation may be placed or made nearer to the centre line of the street or main road than the improvement line; unless with the consent of the local authority or county council concerned.

INSTITUTION OF STRUCTURAL ENGINEERS

Contracts.

LECTURING before the Institution of Structural Engineers at Denison House, Vauxhall Bridge-road, S.W., on January 9, Mr. E. J. Rimmer dealt with some legal problems affecting builders and structural engineers. He said that the most important features which distinguished engineering and building contracts from any others came into existence by reason of the following circumstances:—

(1) The contract works were to be erected upon and affixed to the land of the employer—thus the works done could not be sent back to the manufacturers as in the case of the sale of goods.

(2) The contract works were largely carried out in the open air under unstable conditions, and with material and labour of varying quality—a condition quite different from the manufacture of goods in a factory.

(3) The conditions of excavations and foundations could not be entirely foreseen until the ground was opened up—in deep excavations this circumstance was perhaps the most important of all.

(4) The contract works were often carried out in proximity to properties belonging to third parties.

(5) In order to complete the works, it was generally necessary that work of specialists should be carried out concurrently with the work done by the general contractor.

(6) The period of the contract might extend over several years.

As a result of these circumstances the supervision of the works by a professional man on behalf of the employer became necessary, and such supervision had to carry with it authority to reject material or work, and to vary works to be done according to circumstances. From the engineering point of view a provision in the contract enabling the engineer if need arose to require wholesale modification of the works was essential. So long as the general purpose of the contract was maintained, the modern variation clause was generally wide enough to carry the engineer through any changes he might desire to make, but difficulties arose in two ways. The first class of difficulties arose from the fact that the employer, quite apart from any engineering reason, might call upon the engineer to make variations: it was sometimes important to determine whether a variation was made to meet engineering conditions or not, but whether such matters could be taken into consideration when determining what variation of the contract price should be made depended on the terms of the contract.

The second difficulty was that of valuation: there were many cases in which a valuation of variations clause, which sought to apply bills of quantities rates to any variation of the works, could not but do injustice either to the contractor or the employer. The engineer sometimes found himself in the difficulty that he could not give effect to what he appreciated was the proper valuation of a variation without disregarding that which the contract stated should be the basis of valuation. An example of this occurred when a contractor agreed at a unit price per yard to excavate material, some by machinery and other by hand. If by reason of variations the amount of machine excavation was reduced, and that done by hand increased, a larger burden would be placed upon the contractor; but the engineer might find that under the contract he was unable to give the contractor any relief.

A similar case might arise if an employer decided, after work had been commenced, to have deeper foundations so as to give additional basement accommodation. In such a case the whole of the work of the superstructure might be most seriously interfered with, causing charges to the contractor for demurrage, and an increased period of overhead and plant expenditure. But the engineer in such a case would not be able to make any adjustment of price to cover the contractor's extra expense, if the contract provided that in case of variations the contractor should only be entitled to an extension of time.

From the employer's point of view, however, a contract which was not precise as to what should happen in regard to valuation of variations allowed a contractor to exploit the variations in such a way as to throw the contract on one side and make claims for payment on a different basis. Thus a problem was presented, but much could be done by the clauses of the contract to prevent, or, at any rate, mitigate injustice to either party.

Probably the most important matter affecting the question of variations was the amount of detail which had been prepared in regard to drawings and bills of quantities by engineer and quantity surveyor. When the engineer had not time or information enabling him to develop his scheme, it was necessary to provide in the form of contract itself for such variations as must take place, and it might be that one solution of the difficulty would be a bill of quantities prepared not only for the works shown upon the drawings, but prepared on the basis of possible variations. For example, there would be no legal difficulty to prevent bills of quantities being prepared requiring the contractor to give prices, not only for types of excavation it was assumed would be required, but also for types which the contingencies of the work might necessitate.

Another way of meeting this difficulty was to give the engineer power, when a variation was given, to call upon the contractor to state at once the price he required for the work; it was natural that he should be less disposed to make excessive claims upon the employer during the carrying out of the work than when the work had been completed. Moreover, a claim made at the time the variation was ordered was capable of adjustment. If the whole question was discussed between engineer and contractor, but before the variation was carried out, and the price for the variation then fixed, both engineer and contractor were in a better relative position to assist each other in saving costs to the employer.

Another aspect of the matter of variations was when, for no engineering reason but for the employer's advantage, variations were ordered which had the effect of causing damage to the contractor by throwing out the programme and scheme of work. In such a case the engineer might find himself unable to award the contractor anything for the damage which had resulted; to cover such cases there should be a clause in the contract that if the result of ordering variations was that the conditions under which the remaining work was carried out were different from what they would have been, some adjustment of prices should be allowed.

Another aspect of the variations clause was the fact that the obligation to construct and maintain, and to make good any damage done by the construction of the works either to adjoining property or to the works themselves, imposed a liability upon the contractor which was very little short of a guarantee of the engineer's design. The only safeguard the contractor had against such obligations proving disastrous was that the engineer would in proper cases give a variation order to enable the work to be carried out efficiently and without danger to adjoining building. The importance of the engineer making use of his power under the variations clause in a case of this sort could not be exaggerated. It was not, however, a proper thing for a variation order to be given merely for the purpose of saving the contractor expense; the engineer should refuse to make changes if the sole reason for asking for them was that the original design caused difficulty in construction.

The employment of specialist sub-contractors gave rise to a tripartite relationship between engineer, contractor and sub-contractor, most peculiar and difficult. Legal problems in this connection chiefly arose when the sub-contractor nominated by the engineer refused to indemnify the general contractor against obligations which the latter had under the general contract in relation to the work of the sub-contractor.

For example, a sub-contractor for steelwork in foundations, or in the skeleton of a building, might not be prepared to take the burden of a very heavy penalty for completion of the contract as a whole in relation to the delays which he might cause by non-delivery of his specialist goods. Cases arose where the engineer was rendered impotent when nominating a sub-contractor by the impasse between contractor and sub-contractor as to the contract to be entered into between them. The general contract was deficient if it did not provide for such a situation. Such provision might be made by a clause under which, if the engineer required the contractor to place certain work with a specialist sub-contractor, the general contractor's liability should be discharged when that of the sub-contractor was discharged, while any delay by the sub-contractor was given full effect to in extension of time under the main contract.

CHARING CROSS BRIDGE

OPPOSITION CASE

AN agreed summary of the proceedings at the Ministry of Transport on Monday, December 23, when the Minister and Sir Percy Simmons, chairman of the Improvements Committee of the London County Council, received a deputation representing the Royal Institute of British Architects and the Thames Bridges Conference, on the subject of the Charing Cross Bridge scheme, was issued officially on Monday.

Mr. Stanley Hall, the vice-president of the R.I.B.A., in introducing the deputation, stated that in connection with the proposals for a bridge at Charing Cross, the R.I.B.A. asked for the appointment of an architect on the committee. This was refused on the ground that at that stage scientific engineering considerations were the only issue. They considered that on the Surrey side there was an opportunity for the improvement of London and the Thames greater than had occurred since the Fire of London, and they therefore asked that the Bill should be referred back for further consideration.

Mr. Arthur Keen, the chairman of the Thames Bridges Conference, stated that all the successive official schemes had been frankly viaducts and that viaducts were not wanted in Central London. They sterilised the areas that they touched. He also considered that to meet the wishes of the railway company the station was brought much too near the river on the Surrey side and that in the position proposed it would prevent adequate development of the river front and the area behind it. He added that the members of the deputation did not advocate any particular scheme.

Sir Reginald Blomfield, R.A., representing the Royal Academy, criticised the scheme under the heads "Cost, Traffic, Architecture, and the Surrey side." He did not think that, if the scheme were given effect to, the public would be getting value for a cost which was placed at nearly £15,000,000, much of it compensation for buildings destroyed in consequence of the route selected. With regard to traffic, he drew attention to the closing of roads on the Middlesex side, such as Villiers-street and Buckingham-street, and he did not consider that the approaches on the Surrey side were adequate. The archway proposed at the end of the bridge on the Surrey side would cause congestion of traffic and block a vista from the Strand right across the bridge and to

the country beyond. He thought that tunnels on the Surrey side 350 ft. in length would be unsightly, noisy, difficult to ventilate, and very dangerous, owing to the risk of carbon monoxide poisoning from the exhausts of motor-vehicles in the tunnels. Owing to the levels, the tunnels through which York-road and Waterloo-road would have to pass could not have a greater height than that from the Embankment roadway to the underside of the railway passing over it on the Middlesex side, though they would be more than three times as long. In his opinion these tunnels were a fatal objection to the official scheme. He criticised the circus for a roundabout on the Surrey side, which, he thought, was badly designed. The result would be that there would be heavy congestion at this point.

From an architectural point of view he expressed the view that the scheme on the Middlesex side had been prepared without regard to architectural possibilities. In particular, the tunnel ramp on a steep gradient and the areas left for building would render it impossible to get a satisfactory architectural treatment. Similarly, he thought that the 1,600 ft. of wall formed by the side of the new station along the elevated road would prevent any satisfactory architectural feature there. Generally, he thought that the proposed arrangements on the south side would completely block in the southern area with a solid wedge, resulting in there being a hinterland of slums in perpetuity.

Lord Crawford, the president of the London Society, stated, in dealing with the town-planning aspect of the scheme, that in his view the whole problem should be considered in relation to London as a whole and not only as dealing with a railway problem, and took exception to what he regarded as an arterial road being made before planning the area to be served, and he asked that the scheme should be tested by broad principles and truisms. First, the lay-out should consider development as well as traffic, as the area involved was in the central and most important part of London; secondly, good sites were wanted on both banks. The scheme was defective in this respect. Those on the north side were meagre and shallow. On the south side they were irregular triangles and wedges. Thirdly, viaducts, tunnels and vaults were undesirable. Acres and acres of vaults were created, thereby destroying values, instead of creating them, and the scheme would prevent the development of the Surrey side. Fourthly, bridge traffic should be divided and dispersed as soon as possible, and congestion in the Strand would be serious. Fifthly, shore-to-shore connection was desirable. In conclusion, Lord Crawford stated that a re-planning of the scheme to provide some satisfactory sites for rebuilding would, in addition to improving the appearance, reduce the cost by additional recoupment.

Sir Percy Simmons, on behalf of the London County Council, said that his Council were satisfied, as was the Ministry of Transport, that the scheme did deal more effectively and better with the traffic than any other scheme, providing as it did, among other things, excellent facilities for linking up with the tubes. Dealing with Sir Reginald Blomfield's points on the subject of cost, the speaker did not see how any less expensive scheme could be devised which would be satisfactory. With regard to Sir Reginald's complaint that, from the architectural point of view, there would not be much of a vista, he did not understand how Sir Reginald could obtain the vista he desired and at the same time cope with the traffic difficulties. With regard to the Surrey side, there would, he hoped, be a beautiful embankment garden. From the traffic point of view, the scheme must be considered in relation to the traffic difficulties now existing at the Elephant and Castle and Vauxhall Cross. He pointed out that Sir Edwin Lutyens had been consulted, and had signed the plan showing the lay-out, and in its preparation he had a free hand within the limits dictated by engineering and traffic requirements. He added that, within the limits above referred to, they would welcome any suggestions, which would receive every consideration. He pointed out that the Council intended to go forward with the Bill, and that, in his opinion, it was the only chance this generation would have of getting Charing Cross Bridge. With regard to the design of the bridge and the viaducts, the Council would no doubt desire that these should be put out to open competition.

The Minister of Transport, in reply, stated that he could not undertake on behalf of the Government to ask the London County Council to withdraw the Bill and start more or less *de novo*, and prepare a fresh scheme at this stage. Some amendments might be made as the Bill proceeded, but, as the Ministry had been in the closest association with the Council, it would be a very serious matter for him now to suggest that the scheme was fundamentally wrong and should be withdrawn. With regard to the proposal that the bridge should be connected directly with the Embankment, if this were done much of the traffic crossing the bridge from the Surrey side and going north would proceed up Northumberland-avenue into Trafalgar-square. The Embankment also already carried much fast traffic, which was increasing, and in addition there was an intensive tramway service which, in his opinion, was a most valuable asset in London travelling facilities. Accordingly, to bring the traffic from the bridge on to the Embankment in these circumstances would, in his opinion, invite a very difficult traffic position. It was for these reasons that the lay-out on the north side of the river had been decided upon, so as to avoid the difficulties which would otherwise arise at the Embankment, in Northumberland-avenue and Trafalgar-square.

With regard to the site of the proposed new station it was true that the original intention was that it should be set back farther from the river than was now proposed. The railway company objected, and upon a close examination of this proposal the advisers of the Council and the Ministry came to the conclusion that it was a better scheme as it would provide far greater facilities for passengers to reach the London tube system.

On the engineering and valuation side he was satisfied that the best advice procurable had been obtained and, as to the architectural features, Sir Edwin Lutyens had been consulted, and the deputation was in error in having asserted that he had not signed the plan of the proposed lay-out. He did not desire to suggest that Sir Edwin was responsible for the whole scheme, and he would not be prepared to agree that any architect, or body of architects, should deal with important traffic and engineering matters. All three groups of experts must have their say in evolving the best scheme. This had been done and, subject to what were considered traffic and engineering essentials, Sir Edwin had had a free hand.

Mr. Morrison concluded by saying that while he could not ask the Council to reconsider the Bill, at the same time he welcomed the criticisms of those important bodies whose interests the deputation represented, and he could assure them that within the limits of the present proposals he, personally, and the County Council, would welcome any suggestions for the best possible architectural treatment of a scheme which, he was sure, would offer great architectural opportunities.

Hospital Extensions, Northants.

Messrs. Gotch and Saunders, F.R.I.B.A., architects, Bank Chambers, Kettering, have prepared plans for the erection of a new ward block at the Berry Wood Mental Hospital, to provide accommodation for an additional 100 beds, at an estimated cost of about £90,000.

AMERICAN ARCHITECTURAL PROPAGANDA

THE Southern Chapters of the American Institute of Architects have recently held in Memphis, Tennessee, an "Architecture and Industrial Arts Exposition," with the two-fold object of interesting the public in good architecture, and showing the value of capable architectural service. Some account of the proceedings, which are reported in the current issue of "The American Architect," may be of interest to our readers. In passing, it may be stated that posters advertising the exhibition were carried by the Memphis street cars, and similar posters were distributed about the city; the daily Press also carried mention of the exhibition and activities connected with it.

The most interesting features in connection with the exhibition were two speeches delivered by laymen at a luncheon and a banquet respectively, the first by Mr. F. P. Byington (President of the Producers' Council), and the second by Mr. Milton S. Binswanger, a leading Memphis manufacturer. From these speeches, which are notable for their appreciation of architecture and of the value of the architect's services to the community, we take the following extracts:—

Mr. Byington said: "On every hand we see building construction under way without proper architectural supervision. Many of our large realty development corporations and contracting organisations seem disposed to form their own architectural departments. Is it because the architect is believed to be impractical, and that buildings can be better planned and better built under the control of these organisations; or is it because the services of an architect are believed to be an unnecessary expense? Public taste in this country is improving. In that undeniable fact lies the promise that, if the architectural profession is alive to its opportunity, its future and more dominant influence in building operations are assured. As our people rise culturally they will recognise more and more the need of the trained specialist in the design of their buildings. They will ask and demand this leadership in giving expression to their aspiration in that line. *But leadership passes always to the group which steps out and boldly seizes it. If the architectural profession does not do so, some other group will*—engineering, contracting or realty operating interests will forge to the front as the dominating factor, and the standards they hold out in æsthetic and practical points of design and construction will be the standards which the public will be led to accept and make its own. Consider for a moment the nature of architecture. It is not only engineering. It is not only good practical construction. It is not only the development of real property in a sound manner. It is all these three, and then something more—that beauty which only the architect can mould; that beauty which gives added value to these three essentials, and expresses the soul and life of our civilisation as we would wish this expressed.

"The Producers' Council, a national organisation representing sixty-one of the country's major industries, a group representing over two million persons employed in over nine thousand factories, mills and plants, and having a combined capital of nearly twenty-two billion, five hundred million dollars, together with the potential powers I have intimated in the facts and figures quoted, stands four square in back of the American Institute of Architects in any proposed programme it may wish to adopt for keeping the architect at the head of the procession in the conduct of our building operations."

Mr. Binswanger said:—"If there is any service that I could render to the architects at this time it might be to emphasise what I

have reason to believe is the opinion of many, that architects have, at least for the last one or two generations, and likely for a longer time, underestimated their position and service; and they have quietly suffered from such influences, for it has led the public, who is the beneficiary of their excellent work, to be indifferent. In this course of modesty they have not done the thing that would be creative of the most good for all. Like many virtues we individually possess, unless they are emphasised by understanding and appreciation of others, we do not fully develop them. By demanding, not in an arbitrary way, but in a reasonable way, the proper appreciation of the work you are doing, you not alone serve yourself but open a way toward the creation of finer buildings for whatever purpose intended, and the public at large is the greater beneficiary.

"There is a means to the end suggested, and I probably do not advance you a thought that has not been present with you for a very long time, but I do urge you to put into practice a *campaign of education*, which can be done only through well-presented expressions of your purpose to serve and the economic value of your service. These expressions should appear in every good publication in the country, not for a period of two or three months, but discreetly over a period of several years, in order that you may emphasise to those who should avail themselves of your services the great economy in doing so, and that all who can see and have reasonable human sensibilities can benefit from your skill which has been developed by education and experience. You cannot, as architects, alone provide the necessary funds. You have a right, an unquestioned right, to request others to help you, more particularly those who are producing and distributing building materials. They are really anxious to help you, for in doing so they likewise help themselves. You have possibly, in not pursuing this course, paid the price in being over-sensitive as to the ethics of your profession and have felt that the seeking of opportunities to serve have been undignified. As I see it, this has been an unnecessary attitude. Owners have had a wrong impression regarding the cost of architectural services. Many have felt the cost of this service high or unnecessary. While it may be difficult to evaluate, it can be said that one slight mistake in construction can far outweigh in expenditure the cost of the architect's fee."

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or, better still, in typewriting!—Ed.

Waterproofing Brickwork Outside.

[Reply to "Regular Reader," January 10.]

Sir,—Apply two coats of petrifying liquid on consecutive days.

John M. Fife.

Pointing a "Georgian" Building.

Sir,—I am designing a brick building in a rural area, the front of which is to be in the "Georgian" style. I should be glad if any of your readers could suggest the best method and composition of suitable pointing.

N. D.

Houses per Acre.

[Reply to "J. W. B.," January 10.]

Sir,—The question depends entirely upon how the district has been zoned, if a town-planning scheme has been adopted. The local authority will give the desired information on request.

T. P. I.

Special Type of Brick.

[Reply to Mr. J. P. Dowling, January 10.]

Sir,—Is not your correspondent thinking of some of the ingenious model bricks with which the lucky child of to-day is blessed? It is certain that no form of construction which does not include some mastic jointing material can be a practical proposition.

Mortar.

Close Tendering.

[Reply to "C. C. M.," January 10.]

Sir,—This is generally a proof of competent quantity surveying. Where a bill has been successful in eliminating all doubtful or ambiguous elements, there will be close tendering from any range of experienced firms; but it takes a good surveyor to produce this state of affairs.

Quantities.

Waterproofing Damp Wall.

Sir,—The brickwork of a chimneystack has become more or less waterlogged, and damp is running down the inner walls of the house (the house itself is rough-cast). We understand this is caused by the porous nature of the bricks, following exceptional rainy periods. We do not desire to cover up the brickwork with a cement rendering, and it has occurred to us that you may be able to advise us of an efficient waterproofing liquid or the like.

X. Y. Z. Transport, Ltd.

Damp Walls and the Remedy.

Sir,—I have taken in *The Builder* regularly for a good many years and have been especially interested in the Inquiry section. There has been a lot of controversy and inquiry *re* damp walls, and I notice that every remedy under the sun has been advocated except the right one. There is only one true and old-fashioned remedy, which I have not seen mentioned, and that is, stud walls. I have walls which have been absolutely drenched with rainwater, 9 in. thick only, and not a sign of dampness shows. If the present-day builders do not know how to construct stud walls I am quite willing to tell them through *The Builder*. They are simple and inexpensive.

Holloway. G. B.

Bacon Pickling Tank.

Sir,—Could one of your readers oblige by giving some information regarding the best-known method of building or lining out a tank suitable for pickling bacon in a factory? The brine used is eight parts salt, one part saltpetre, in water, making as strong a solution as possible and heated to 200 degrees F. Pickling tanks used, approximately 20 ft. by 4 ft. by 4 ft., so far have been lined with glazed bricks. The bacteria do not harm the bacon if the brine is kept fresh, and this is therefore changed frequently and tanks are cleaned out, but the bacteria enter the fine cement joints and where the glaze chips off are harboured and developed, thus injuring the bacon. Would teak be suitable for the purpose? If so, what should the joints be made with? We presume red lead joints would not do for foodstuffs. Failing that, is there any suitable hard substance that the tank could be lined with?

H. F. T.

Profit Basis and Close Tendering.

[Reply to Mr. J. M. Fife and "C. C. M."]

Sir,—If Mr. Fife is talking of builders with a turnover of a thousand a year, he may be right in saying that builders generally add one-third to cost. If he is talking of those with a thousand a month, he can reduce his profits to 10 per cent.; if of those with a thousand a week, his profit will come down to the neighbourhood of 5 per cent. Loose statements, like loose estimating, cause a lot of trouble in the trade.

"C. C. M." does not understand close tendering. More and more firms are taking to estimating (and costing) in a scientific manner, and when this becomes the general practice there will not be the differences we have seen in the past. The pricing schedule, brought up to date frequently, is rapidly replacing the "jumped-at" price. Not that the schedule alone serves; experience helps tremendously.

M. P.

Sir,—I would suggest that 25 per cent., let alone 33⅓ per cent., is too high a profit and establishment percentage to allow. The net profits on such a basis would be enormous where the turnover was considerable, while the businesses of smaller turnover are generally run by working builders who are content with an income little more than the wage of a foreman. This is the sort of thing which makes people dread the occasion when the builder has to be called in for repairs.

Fair Profit.

Sir,—In connection with this question, which has been discussed by correspondents in your Inquiry Bureau, we have had one or two cases in which our charges for jobbing work have been disputed, and our profit has never been above one-third. We have never pursued these disputes in the County Court as we have thought that a judge might say that one-third added to the cost of labour and materials was too high a rate of profit in view of the fact that architects when valuing extras on contract work generally allow 15 per cent., which is reckoned to include profit and establishment charges. We have been unable to find any authority for regarding 33⅓ per cent. as a fair profit for jobbing work, but from twenty years' experience we have found that a lower rate of profit is insufficient.

W. G. & S.

Picture Rails.

[Reply to "Householder," December 20.]

Sir,—I remember seeing in the U.S.A. a few years ago a flush metal picture-rail which was being used in large buildings to avoid any projection which would hold dust. It was something like the accompanying

sketch in tin or thin galvanised metal, I believe. How it was fixed I do not know, but it had every appearance of being simply bedded into the plaster. It is an idea that might well be worked out by suitable manufacturers in this country.

H. G. Watkins.

Floor Question.

Sir,—I am renovating an old country cottage and would like to know the relative merits and advantages of an ordinary board floor (ground floor) laid with joists on sleeper walls and about 9 in. air space underneath, and a board floor laid on the solid with bevelled joists 2 in. by 3 in. creosoted, lying on a concrete bed and filled in level, as to

durability, comfort, and general convenience. The floor will be well above outside ground level. If the latter course is adopted, will it be necessary to tar the boards? The accompanying diagram shows what I contemplate in the latter case. In the former case the ground would have to be dug out.

Midlander.

THE BUILDING TRADE

THE USE AND ABUSE OF BUILDING MATERIALS—III

By A. M. GILES, B.Sc., A.I.Struct.E., A.M.I.E.E.

BUILDING STONES (*continued*).

"Permanent Set."—By some authorities it has been suggested that in the compression test the unit stress at the elastic limit should also be noted. This could hardly refer to stones, since their elasticity, if there be any at all, is a negligible quantity. Rather do we get what is termed a "permanent set." This really means that as the compression load increases the stone yields slightly and, should the load be removed, it does not recover, but remains permanently smaller. This decrease or alteration is known as the "permanent set."

When carrying out a crushing test on a piece of Portland stone, the following very interesting curve (Fig. 2) was obtained. It shows the relation between the amount of "set" and the load as it was gradually increased. The "set" was measured in thousandths of an inch, and the increasing load in tons. Finally, in conducting a crushing-test experiment the specimens should be selected from different strata of the same quarry and from the interior as well as the exterior.

It is rather vague to say that a particular granite, or sandstone, or limestone shall have a certain crushing stress in tons per sq. ft., or even to generalise by saying that granite has a crushing stress of about 1,300 tons per sq. ft., sandstone about 700 tons per sq. ft., or limestone about 600 tons per sq. ft. It seems rather better to know what is wanted, and what the stone from any particular quarry will give, since, according to the quarry, granite may vary from 900 or less to 1,600 tons per sq. ft. for crushing, sandstone from 400 to 1,200 tons per sq. ft., and limestone from 200 to 1,200 tons per sq. ft. In all cases the numbers are assumed to be those when the test is made at right angles to the natural bed, or plane of bedding.

Density.—The density, or weight per cu. ft., is a rather important item of consideration for the builder. The stability of such structures as dams, retaining walls, buttresses, and even lofty piers depends, to a large extent, upon the density of the stone used. For ordinary walls, arches, etc., the weight is not such an important matter.

Factor of Safety, and Working Stresses.—It is impossible to emphasise too much the necessity for appreciating the significance of the term "Factor of Safety." It is really the relation of the crushing stress to the working or allowable stress. In the case of stones it may be anything between 10 and 20. For example, if in the test of a piece of granite it is found that the crushing stress is 20,000 lb. per sq. in., and the "factor of safety" is taken as 20, then the allowable or working stress must not exceed 1,000 lb. per sq. in. This actually means that calculations of the loads to be supported should be carefully worked out, and arrangements made whereby samples of the tested stone should not be called upon to carry persistently more than 1,000 lb. per sq. in.

It is natural to suppose that the "factor of safety" will to a large extent be decided by the quality of the masonry work as well as the crushing stress of the material. For example, in rubble masonry, where the stones are of irregular shapes and sizes, and there are no regular joints, the working stress may be as low as 150 to 180 lb. per sq. in. In the case of railway bridges where the bearing is on granite masonry, some tables say that the working stress should not exceed 900 lb. per sq. in., and in the case of sandstone and limestone about 400 lb. per sq. in. In fire-underwriters' tables we find that for cut-stone masonry other than sandstone the working stress is given as 600 lb. per sq. in., and for sandstone masonry only 300 lb. per sq. in. In the case of granites the working stress may vary from 1,000 to 2,400 lb. per sq. in., according to the value of the crushing stress as determined by a test.

Porosity or Soakage.—There is no doubt that the most powerful disintegrating agents, where building stones are concerned, are water, temperature changes, and, of course, fire and gases. It has been suggested that where disintegration by gases or fumes is likely to take place the advice of a chemist should be sought. In the case of the disintegrating effects of water and temperature, the knowledge of the physicist is tantamount.

By porosity or soakage is meant the tendency that is shown by a stone to absorb water. All stones will absorb water, and are therefore more or less porous. The absorption of water is by many considered to be a good index of the lasting property of a stone. For example, in judging between the use of two stones, an absorption test, which can be carried out quite easily, is advisable.

From Merrill's tables we find that granites absorb rather less than 1 per cent. of their dry weight, limestones and marble from 1 to 3 or 4 per cent. It would thus seem that granite is the most durable, marbles and limestone next, with sandstones placed last. It is well known that this is endorsed by the wide experience of many experts.

Another test that is sometimes applied when deciding upon the choice of one of two stones is the "freezing test." Cubes of the stone are soaked in water, and then exposed for some time to a temperature below freezing point. After repeating the process a given number of times, the cubes are dried and weighed so that any loss of weight may be noted. This gives a clue to disintegration. Naturally, one must confess that "experience of any particular stone" is far and away the best test, but, of course, where and when this is not available other methods have to be used.

Quarrying.—A word or two about stone-quarrying, in so far as it affects the life of the stone, may not be out of place just here. First and foremost it should be remembered that a stone should not be used or laid immediately after quarrying. All stones have in their pores a certain amount of moisture called "quarry-sap." Therefore, after quarrying, the stone should be left until the "quarry-sap" has evaporated. Next, because limestones and sandstones have been deposited in strata, they have distinct planes, along which they will cleave. Usually these planes are easily seen in sandstones, while in limestones it is only the real expert who is able to say definitely where they are.

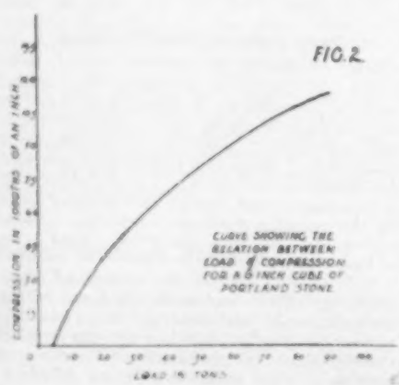


FIG. 2.
CURVE SHOWING THE RELATION BETWEEN LOAD & COMPRESSION FOR A 6 INCH CUBE OF PORTLAND STONE
COMPRESSION IN THOUSANDTHS OF AN INCH
LOAD IN TONS

In erections, these planes of cleavage, as they are called, should always be horizontal, and perpendicular to the external pressure; further, care should be exercised in arranging that the ends of the layers shall be exposed to the weather. It has been stated that the mason should pay particular attention to the cleavage planes when laying stones. The mason sometimes is helped in this direction by the quarryman, who either marks or numbers the planes of cleavage. Further, it is advisable that the selection of stones should to some extent depend upon the work for which they are to be used. In many cases the position in a building is often a deciding factor as to what stone shall be used.

Seasoning.—As stated above, stones should not be used until the "quarry-sap" has had time to evaporate. Most stones, including granite, harden on exposure, *i.e.*, while the "quarry-sap" is evaporating. Naturally, granite and the harder stones are more easily worked when freshly quarried, while in the case of the softer stones it is best that they should not be worked until after months of exposure. It has been suggested that after stones have been worked their surfaces should be slurried with dust containing a very small percentage of plaster.

Durability and Weathering.—A stone building or monument should remain in good condition hundreds of years, though it is possible for it to crumble and disintegrate in as short a time as 25 years. In Egypt, Italy and Greece, stone buildings have been in existence many centuries, whereas in England their life, by comparison, is very short.

The durability of a building stone in which is involved the subject, very popular nowadays both as a phrase and as a matter of immense importance, viz.: the weathering of stones, depends, in the main, upon the composition of the stone, also upon its structure, and, of course, upon its exposure to weather. To be really durable, stones must put up a good resistance to heat, cold, water, frost, and chemical action. The most important disintegrating agent, anyway, in the case of rocks which are relatively impervious to water, is variation or change of temperature. The different crystals composing a rock have different expansions and contractions along different axes, and therefore temperature change sets up enormous internal stresses. It has been found that a stone is materially weaker after a few temperature changes; for example, unequal heating by the sun.

Again, as mentioned previously, porous stones are less durable than non-porous ones; also, stones containing iron compounds are less durable, and therefore weather badly, because of the oxidation of these compounds, which is accompanied by increase of volume and consequent weakening. Then, again, there is the discolouration of the stones, due to the oxidation of the iron compounds.

In cities and towns, because of the prevalence of the gaseous oxides of carbon and sulphur, which combine with moisture to form acids, certain stones are far less durable because of the chemical action of these acids upon their composition. Limestones, being carbonates, are particularly liable to attack, with the consequent bad weathering effects. Therefore, in selecting stones for building purposes in large cities, much care is necessary, and it may again be repeated that marbles and limestones suffer most because of the above-mentioned impurities in the atmosphere.

The durability and weathering of stones depend, according to some authorities, upon the methods of blasting and cutting them. For example, small charges of explosives are much better than large quantities. Repeated hammering is likely to injure a stone. Those cut with a saw last better than those that have been hammered. Again, porous stones, like sandstone, should not be quarried in frosty weather. Naturally, polished stones will last better than rough ones, as the rain-water slides off them. Again, it is admitted that the durability of a stone will depend upon the position in the quarry from which it was obtained. For instance, that from exposed surfaces is less durable than that lower down, which has been unexposed to weather or ground water.

PRESERVATIVES.—The preservation of building stones is fast becoming a very important matter. One has to believe either that disintegrating agencies are on the increase or that builders of comparatively recent date have not possessed sufficient knowledge and experience in the selection of stones. Whatever it is, there is no doubt that the suggested preservatives are multiplying in number. Many of them are proprietary articles, others the outcome of applied common sense. The Americans, whose love of antiquity ranks almost next to their love of the "Almighty Dollar," have coated with paraffin wax the Obelisk (sister or brother to our Cleopatra's Needle), situated in Central Park, New York. Other people have used paints, oils, and chemical solutions, and have arranged for them to be renewed from time to time. Others suggest that after the surface of the stone has been thoroughly cleaned, boiled linseed oil, or paraffin, or soap and alum solutions should be carefully applied. In the case of paraffin wax it should be melted, then applied with a brush, and finally heated so that it may be driven into the pores of the stone. Another preparation is a mixture of creosote and naphtha. This is said to prevent organic growth.

Probably one of the best-known preservatives is Ransome's. Fill the pores of the surface of the stone with potassium or sodium silicate, and, after this has dried, apply, with a different brush, a coating of calcium chloride. This interacts with the sodium silicate and forms a lime silicate cement, which is known to withstand wonderfully the destructive action of weather agencies.

SPECIFICATIONS.—Just a word or two about specifications. These, in many cases, state the stone to be used as well as the quarry from which it is to be obtained. Sometimes a choice is given, but this is seldom satisfactory to all parties. The crushing strength is usually specified. As a guard against frost it is usually stated that the stone must be seasoned (*i.e.*, from which the "quarry-sap" has evaporated). Again, the stone must be free from flaws, seams, cracks, discolourations, etc.

When the sizes of the stones are given, it is usually understood that these depend upon the magnitude of the work as well as, of course, the sizes that can be obtained from any particular quarry. There must be no acute angles in the shape of the stone, *i.e.*, no angle under 80 or 90 deg. is allowed. Lastly, the stones must be laid with their natural bed in a horizontal plane.

AIDS TO JUDGMENT.—Finally, let us conclude the section on building stones with a few of the aids to judgment mentioned in Husband and Harby's "Structural Engineering." These may be particularly helpful in specifications.

1. For durability, make a thorough inspection of existing structures of the same stone, or a careful examination of the weather-resisting qualities of an exposed face of the quarry from which the stone is to be obtained.
2. Arrange for suitable tests for finding the compressive resistance.
3. In very important work, have special tests made upon the particular stone to be used.
4. When found, a suitable stone should show a clean fracture, a dense and fine-grained face free from earthy matter.
5. Porosity test should be carried out by immersing a piece of the stone in water to ascertain the percentage of water absorbed; and, lastly,
6. What effect the immersion of the stone has upon the cleanness of the water, since it gives an indication of the presence of earthy matter.

THE BUILDER'S FOREMAN

By J. R. TAYLOR.

A CORRESPONDENT writes:—"Being a student of the building industry, and anxious eventually to become a general foreman, I am desirous of attaining knowledge to this end. . . . I have tried in vain to procure works other than text-book, enabling me to study the methods, duties and requirements of one in the above capacity."

LEADERSHIP.—The gift of leadership cannot be acquired from text books. Our correspondent might as well ask for text-books on such subjects as how to become a Prime Minister, a General, an Admiral, and so on. All that can be indicated to him is the line of study and effort along which he must proceed so to equip himself that if he has any gift for leadership he may attain his ambition sooner than otherwise.

Leadership is a very subtle gift. Take a dozen men of about equal intelligence and set them some simple task such, say, as clearing a large field of stones. Group them and address your instructions to them as a body. Almost as soon as they are through the gate they will have a leader. The leadership may change hands once, or even twice during the day, but by evening they will have an established leader. Set these same men a more complex task and the man with some experience and knowledge will lead, but if he is to retain his leadership he must have an aptitude for it or he will be displaced. Our student, then, must set about attaining such a wide, all-round knowledge of the trade in all its branches that in the absence of one of equal attainment and greater aptitude he will be the naturally selected leader. By continuous study he may hope to retain his place.

APPRENTICESHIP. — Our correspondent states that he is a student of the building industry. It is to be hoped, for his own sake, that he can add to this that he is serving, or has served, an apprenticeship to one of the crafts, otherwise he has not started correctly. Positions as surveyor or even manager are obtainable via the school and office, but the most direct route to the position of general foreman is by way of the crafts.

Formerly, most foremen were promoted by virtue of a reasonable degree of skill at a craft, coupled with an ability to "drive," and backed by a happy knack of getting round difficulties. The builder, either directly, or through a walking foreman or a manager, held himself responsible for the job, organisation and staffing. This system still holds good to-day to some extent, but is rapidly giving place to a newer one, under which the foreman is given a progress chart and expected to satisfy a prime cost clerk and a surveyor. Provided he can do this without seriously upsetting the clerk-of-works and the architect, the foreman is now given a much freer hand, but shoulders a much heavier responsibility, and consequently requires a greater amount of general knowledge of all trades than before.

But something besides knowledge and skill is required of him; to get the best out of his men he must have their confidence and know them. This knowledge is most easily attained by working alongside of the men he will later rule, and will be obtained or, as it were "soaked in" unawares, during apprenticeship and craft training.

LINE OF STUDY.—Our correspondent will have gathered that to attain his ambition he must prepare himself by continuous study and very hard work. In his eighteenth year he should be attending evening classes at the technical school with a view to taking at least a "pass" in Elementary and Advanced Building Construction. In the necessary study to pass his examinations he will come by a good deal of knowledge of, but slight use to, a foreman, but it will not be entirely wasted, and his certificates will "hall-mark" him as being possessed of application and brain. I choose his eighteenth year for this course because by then his nightly study will have many points of contact with his daily work. As a result of these contacts, not only will the subject be more easily mastered, but the impression will go deeper than at an earlier age. He should during the same period (18-21) make himself conversant with the uses of the dumpy level and the slide rule. I do not mean by this that he must complete a course of field surveying, but he must know enough to calculate from a datum line and bench mark, and obtain the correct length and cut of a hip or valley rafter and analagous work. At the end of his course he will be a draughtsman of a sort, be able to prepare a working drawing, and "read a plan."

READING.—While not entirely denying himself the rest and recreation afforded by light literature, our student's main reading should be technical. He should subscribe to the trade journals and read them religiously from cover to cover, not excluding the advertisements. The advertisements will help to keep him abreast with the times as regards new materials and methods. Even the "situations vacant" and "wanted" columns will teach him something, set him a standard, lend him humility, spur him on to further effort, and ultimately find him a post. The "Inquiry Bureau" of *The Builder* will afford him both instruction and recreation; the student should take the questions for the week, jot down his own answers in a note-book, and compare then with the answers from experienced correspondents in the following weeks. He should also possess and constantly refer to a good glossary of architectural and building terms, and never leave the meaning of a word read unlearned.

TRADE CATALOGUES.—To one who really loves his trade, the perusal of trade catalogues is a never-ending source of pleasure and instruction. Into the largest text-book that was ever compiled it would be nearly impossible even to tabulate a three-line description of all the great variety of articles and materials used in the building trades. To illustrate what I mean I will quote from my favourite glossary:—

"Nails. . . . There are three leading distinctions of iron nails as respects the state of metal from which they were prepared—'wrought,' 'cut,' and 'pressed.' . . . Of the wrought or forged nails there are about 300 sorts, which receive different names, expressing for the most part the uses to which they are applied, as 'hurdle,' 'pail,' 'deck,' 'scupper,' 'mop,' etc."

After over forty years' experience I can remember the names and uses of about 100 of them, and should perhaps recognise the names of some 50 more if I came across them. Of those I do remember or recognise, probably 50 per cent. were first seen in a trade catalogue.

The student will now have realised that the study of the building industry so lightly entered into by the many is a life-long engagement persevered in by the few. If he has this perseverance, he may be sure of reaping a reward.

STANDARD FORM OF SUB-CONTRACT

We have received a copy of a Standard Form of Sub-Contract which has been prepared by a Joint Committee of Specialist Associations for the purpose of safeguarding, in the main contract between the employer and the builder, the rights of sub-contractors. The Councils of twenty-four Associations have been represented in the preparation and approval of this Form, and a list of these bodies is given hereunder. We propose to make further reference to this matter in a later issue, and in the meantime we take the following extracts from an article in the December issue of the "Journal of the National Association of Heating, Ventilating and Domestic Engineering Employers," by Mr. J. L. Musgrave, setting forth the history of the negotiations which have taken place. He recalls that "in January, 1925, a letter was written to the Secretary of the Royal Institute of British Architects requesting consideration and approval of a revision to the form of contract in reference to sub-contracts, and a letter was sent to the Secretary of the National Federation of Building Trades Employers suggesting certain modifications to the model form of sub-contract. The Building Trades Employers replied that they would be prepared to meet the members of the Joint Committee after the form of contract had been settled with the Royal Institute of British Architects. The Secretary of the R.I.B.A. stated on October 20, 1925, that the proposal had been submitted to the Contract Committee of the Royal Institute, and that the Committee 'felt themselves unable to recommend the adoption of the suggestions contained in the letter referred to.' Correspondence ensued, but no further active steps were taken until recently, when the 1928 model form of contract, which had been discussed by a Joint Committee of the Royal Institute of British Architects and the National Federation of Building Trades Employers was submitted to the members of the Royal Institute of British Architects for ratification.

"It was seen that the position of the sub-contractors would be worse than before, and the various sub-contracting Associations asked the Joint Committee of Specialists to take active steps to ensure that the interests of sub-contractors were not prejudiced. Under present-day conditions sub-contractors are responsible for the larger proportion of the work executed on buildings. In the interests of all parties it was essential that the views of sub-contractors should be heard before the terms of the main contract were agreed. The difficulties of sub-contractors were much increased by an amended form of sub-contract for building work issued by the Institute of Builders in 1926. The use of this form led to considerable 'haggling,' and, in very many cases, work was finished before the sub-contract form was signed; the main contractor, however, in the majority of instances, agreed to the modifications required by the sub-contractor. . . .

"Meetings of protest against the 1928 model form of contract were held by numerous bodies, and a meeting of the Joint Committee of Specialist Associations was held under the chairmanship of Mr. Cash, of Messrs. H. J. Cash & Co., Ltd., Westminster. Many sub-contracting firms, hitherto not represented on this Committee but with whom communication had been established in various ways, were represented at this meeting, at which it was agreed that the right procedure to adopt was to proceed forthwith with the drafting of a form of sub-contract which would be acceptable to sub-contractors, and that efforts should be made to get this form accepted by architects and builders; and to arrange in due course for the main contract to be so worded that the interests of the sub-contractors, as governed by the sub-contract form, should be provided for in the main contract. A sub-committee was formed under the chairmanship of the writer to draft a form of sub-contract, to co-operate, if possible, with the Federation of British Industries, and to report to the main committee in due course.

"Communication was once more established with the National Confederation of Sub-Contractors, who had been associated with the Joint Committee in its early days, but whose representatives had been withdrawn owing to certain differences of opinion as to the correct method of procedure. Certain of the Associations were very strongly of the opinion that it was useless to attempt to prepare and agree to a sub-contract form until the main contract form had been agreed. It was proved to these Associations, however, that it would not be possible to secure adequate protection for sub-contractors in the main contract until the terms upon which the sub-contractors were prepared to enter into sub-contracts with builders were defined. It was, therefore, necessary to settle the whole of our relationship with the main contractors, and, by determining how far sub-contractors' interests could be protected in the sub-contract form, it would be possible to decide what further protective measures should be taken to safeguard sub-contractors' interests in the main contract. It was ultimately agreed unanimously that the terms of the sub-contract should be agreed first, and that efforts should be made later to embody such of those terms in the main contract as were applicable, and, at the same time, secure certain modifications in other clauses of the main contract to meet the interests of the sub-contractors, such as the clauses dealing wtih the payment by the employer direct to sub-contractors and the issue of certificates by the architect. Neither of these matters could be dealt with under the sub-contract form as the employer was not a party to this sub-contract. . . .

"There is every reason to believe that if all sub-contracting Associations adhere loyally to the terms of the Standard Sub-Contract Form, acceptance by the builders and the architects will be obtained in due course. Any members of this Association who are unable to secure acceptance of the terms should report the matter to the Secretary, who will, in turn, report to the Joint Committee. Now that practically the whole of the sub-contracting firms in the country are united on this matter, complete loyalty on the part of individuals is all that is necessary to end permanently the difficulties which all sub-contractors have experienced in the past. In some instances this may necessitate some small sacrifice on the part of individuals."

The names of the Associations who have approved of the new Standard Form of Sub-Contract and who are recommending it for the use of their members when entering into contracts for the supply and fixing of goods or materials, or for work to be performed on the site, are as follows:—

Asbestos Association, Ltd.
Associated Master Plumbers and Domestic Engineers.
Association of Floor Constructors.
Association of Flooring Contractors.
Bridge and Constructional Ironwork Assoc.
British Engineers' Association.
Builders' Merchants' Alliance, Ltd.
Confederation of National Associations of Sub-Contractors (Building and Allied Trades) comprising:—
- National Assoc. of Master Plasterers.
- National Federation of Master Painters and Decorators of England and Wales.
- National Federation of Plumbers and Domestic Engineers (Employers).
- National Federation of Slate Merchants, Slaters and Tilers.

Electrical Contractors' Assoc. (Incorp.).
Federation of Manufacturers of Artificial Stone.
Glazed and Floor Tile Manufacturers' Assoc.
Joint Committee of Specialist Assocs.
London Constructional Engineers' Assoc.
London Master Asphalters' Assoc.
Marble Workers Employers' Assoc.
Master Carvers' Assoc.
Metal Window Makers.
National Assoc. of Heating, Ventilating and Domestic Engineering Employers.
National Gas Council.
National Master Tile Fixing Assoc.

[We understand that copies of the Form can be obtained from the secretaries of the Specialist Associations, price 6d. each, 5s. for a dozen copies, or 10s. for 25.]

PLUMBING TRADES APPRENTICESHIP

A meeting of the Plumbing Trades National Apprenticeship Council was held at 81, Gower-street, W.C.1, on December 13, 1929, with Mr. Ernest Lesser in the chair.

It was resolved that the thanks of the Council be accorded to Dr. Sumpner, who was shortly about to retire, for his valued co-operation and interest in the Council's work during his period of office. On the proposal of Mr. Thacker, Mr. Lesser was unanimously re-elected chairman of the council for the year 1930. In returning thanks for his re-election, Mr. Lesser suggested that the Council would do well to consider the advisability of making their future headquarters in the North of England, and choosing their chairman from that area. On the proposal of Mr. Hoey, Mr. Thacker was unanimously re-elected vice-chairman for the year 1930, and on the proposal of the Chairman, Dr. Clay was unanimously re elected Hon. Secretary and Hon. Treasurer for the same period

A report regarding the progress of the apprenticeship scheme was received from North East Lancashire. It called attention to certain difficulties connected with the attendance at technical classes of lads living in towns on the border-line between Yorkshire and Lancashire. Mr. Manson stated that the West Riding authorities were willing, if necessary, to pay the travelling expenses of students desirous of attending classes over the border, in Lancashire, and that there were reciprocal working arrangements between the two counties to enable such cases to be satisfactorily dealt with. It was agreed that area councils be asked to furnish, if possible, returns as to the total number of plumbing apprentices indentured, and still serving their apprenticeship in their respective areas, and also as to the total number who had completed their indentures in these areas.

With reference to the problem of the rural apprentice, the Chairman reported that a deputation from the Council (consisting on each occasion of Messrs. Hugh Davies, Mr. Caroe, Dr. Clay and himself) had waited upon the Charity Commission and the Board of Education. Valuable information had been obtained, and a memorandum giving the joint effect of the two interviews had been drawn up.

The Chairman initiated a discussion on the situation that would probably confront industry if the Bill raising the school leaving age to 15 were passed. Not only would this have the effect of keeping from 350,000 to 400,000 juveniles off the labour market for the year following April, 1931, but the temporary shortage would be further accentuated by the fall in the birth-rate during the War, the results of which were already beginning to make themselves felt in a diminution in the annual number of school-leavers. It had been calculated that from the latter cause alone there would have been in 1933 a reduction in the number of available juveniles, over the whole country, from 2,175,000 to 1,756,000. The shortage of recruits for industry would not, however, be uniform all over the country, but would vary considerably in different areas. After a lengthy discussion, it was resolved, on the motion of Mr. Hellyer, that a small sub-committee, to consist of the Chairman, the Hon. Secretary and Messrs. Davies, Stephenson and Blackman, be set up to consider the whole question, to report to the Council at their next meeting and, if necessary, to convene an urgency meeting.

NEW BUILDINGS IN LONDON

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned. Items should be received at THE BUILDER *office not later than Tuesday evening.*

Balham.—ALTERATIONS.—Messrs. Courtney and Fairbairn, Ltd., of 377, Albany-road, S.E.5, are the contractors for alterations and additions at 98-100, Balham High-road.

Battersea.—EXTENSIONS.—Extensions are proposed by the Governors of the Anti-Vivisection Hospital and Battersea General Hospital (Incorporated), Albert Bridge-road, S.W.11. It is expected that the work will cost about £35,000.

Becontree.—GARAGE.—A new garage is to be erected on a site at the rear of the new shops in Wood-lane. This building is to be occupied by Messrs. Polley and Co., of Plymouth-road, E.16. Messrs. North, Robin and Wilsdon, FF.R.I.B.A., Townsend House, Greycoat-place, S.W.1, are the architects.

Bow-lane.—EXTENSIONS.—A scheme of extensions is to be put in hand at the Finchley Memorial Hospital. The contract has been placed with Mr. F. C. Stockman, of 1a, Rosemont-parade, Ballard's-lane, N. Finchley. The architect is Mr. H. Goslett, F.R.I.B.A., 28, Theobald's-road, W.C.1.

Brompton-road.—REBUILDING.—A block of shops, showrooms and offices is to be erected on the site of Nos. 197-205, Brompton-road and 11 and 12, Ovington-gardens, S.W.7. The plans have been prepared by Mr. R. M. Pigott, F.R.I.B.A., of Messrs. Murrell and Pigott, 44, Bedford-row, W.C.1. Messrs. F. and H. F. Higgs, Ltd., of Station Works, Hinton-road, S.E.25, are the contractors. Their contract amounts to between £85,000 and £90,000.

Cambridge-road, W.—FACTORY.—On a site in Cambridge-road and Cambridge-yard a new factory and garages are to be erected for Mr. C. Kirby. The plans have been prepared by Mr. R. A. C. Churchward, architect, 92, Victoria-street, S.W.1.

Clapham-road.—BUILDING.—The St. Bede's Church Institute are to erect extensions to their building for the deaf and dumb.

Croydon.—SHOPS.—Messrs. Garrett, White and Poland, 17, Hanover-street, W.1, are to develop an extensive site in the High-street, covering Nos. 88-99. They propose to erect six shops and a hall. The plans are by Messrs. North, Robin and Wilsdon, FF.R.I.B.A., of Townsend House, Greycoat-place, S.W.1.

Croydon.—EXTENSIONS.—The B.G. propose to carry out considerable extensions to the Mayday-road Hospital. The scheme is estimated to cost between £27,000 and £30,000. Messrs. H. Berney and Son, of High-street, Croydon, are the architects.

Ealing.—THEATRE.—Plans have been submitted to the Ealing Town Council for the building of a theatre opposite the Town Hall, in Uxbridge-road, W.5.

East Ham.—EXTENSIONS.—The Borough Council are considering the question of the carrying out of a scheme for extension and alterations at the Isolation Hospital.

Finsbury Park. — REBUILDING. — Messrs. E. A. Roome & Co., Ltd., of Hackney, are pulling down and rebuilding "The Manor House" public house, Green-lanes, Finsbury Park, N., for Messrs. Watney, Combe Reid & Co., Ltd., under the supervision of the company's architect, Mr. A. W. Bloomfield, L.R.I.B.A.

Fulham.—CONVERSION.—New premises are to be erected on the sites of 81-83, High-street for Messrs. Hodgkins, Ltd. The contract has been let to Messrs. T. H. Adamson and Sons, 145, High-street, Putney, S.W.15. Messrs. G. Elkington and Son, of Norfolk House, Lawrence Pountney-hill, E.C.4, have prepared the plans.

Hackney.—EXTENSIONS.—For extensions to the Millfields generating station, the Hackney Borough Council has accepted the estimate of Messrs. J. Jarvis & Sons, Ltd., of 8, Wormwood-street, E.C.2, at £39,893.

Hackney. — EXTENSIONS. — The Hackney Borough has recommended an extension of the Town Hall involving the acquisition of land in Hackney-grove and the diversion of the highway of Hackney-grove. The Borough Engineer and Surveyor is preparing sketch plans.

Hackney. — BUILDING. — The Commercial Motor Transport Co. are to have a new building erected at 9, Exmouth-place, Hackney, E.8.

Hammersmith.—ADDITIONS.—At a cost of £100,000, the B.C. propose to extend Hammersmith Hospital.

Hampstead.—BUILDING.—The B.C. is to erect a disinfecting and cleansing station upon the original site for the public health station in the north-eastern corner of the electric lighting station yard in Lithos-road. The Council's architect is Mr. G. T. Mullins, A.R.I.B.A., 5, Verulam-buildings, Gray's Inn, W.C.

Harringay Park.—RINK.—It is proposed to contract a roller-skating rink near the greyhound racing track. The rink is to be capable of accommodating 3,700 people.

Holborn Viaduct. — RESTORATION. — A scheme is under consideration for the restoring of St. Sepulchre Church. Messrs. Dove Bros., Ltd., of Cloudesley-place, N.1, are at present engaged upon clearing the interior and reglazing the windows. The entire scheme is estimated to involve an expenditure of £6,000. Sir Charles Nicholson, 2, New-square, Lincoln's Inn, W.C.2, is the architect.

Kenton.—HOUSES.—Messrs. F. & C. Costin, Ltd., builders, Kenton-road, Harrow, have recently had plans passed for the erection of 550 houses and shops in connection with the development of a new section of the Northwick and Woodcock Dell estates, Kenton, including the construction of concrete roads, new sewers, etc.

Lewisham. — PREMISES. — The Lewisham Borough Council decided some time ago to proceed with the erection of disinfecting and cleansing stations at Wearside-road Depot, subject to the approval of the Ministry of Health. The scheme has now gone a step further by application having been made to the Ministry of Health for the borrowing of £9,750.

Old Bond-street.—BUILDING.—The site at the corner of Old Bond-street and Stafford-street, W.1, is being cleared by Messrs. Henry Boyer, Ltd., of Terminus-wharf, Paddington-basin, W.2, preparatory to the erection of a range of shops, showrooms and offices, for Messrs. Yardley and Co., Ltd. The building contract has been let to Messrs. Gee, Walker and Slater, Ltd., of 31, St. James'-street, S.W.1. Messrs. Wimperis, Simpson and Guthrie, FF.R.I.B.A., of 61, South Molton-street, W.1, are the architects.

Ranelagh-gardens.—FLATS.—On a site adjoining Hurling-court a block of flats is to be erected. The plans have been prepared by Messrs. Joseph, 2, Paul's Bakehouse-court, Godliman-street, E.C. Messrs. Higgs and Hill, Ltd., Crown Works, South Lambeth-road, S.W.8, have secured the contract for the work.

Regent's-park.—IMPROVEMENTS.—Work is shortly to be commenced upon a large scheme of improvements at the Zoological-gardens. The proposals chiefly concern the old refreshment rooms. The scheme is to be carried out by the Society's own Works Department, under the supervision of Mr. Ball, the clerk of works.

Rickmansworth.—SCHOOL.—The governors and subscribers of the Royal Masonic Institution for Girls approved that the building of the school-houses for the new senior school at Rickmansworth Park be proceeded with on the estimate of Messrs. Walter Lawrence & Son, Ltd., at £128,432. Messrs. Denman & Sons, 27, Queen's-road, Brighton, are the architects.

Rotherhithe-street. — RECONSTRUCTION. — Messrs. Courage and Co. propose to rebuild their premises, the "Blacksmith's Arms" public-house.

Sloane-square. — RECONSTRUCTION. — The Queen's Restaurant, 4 and 4a, is to be entirely rebuilt. Messrs. A. and C. Clark, builders, 3, Bristol-mews, Paddington, W., have secured the contract. The plans have been prepared by Mr. G. E. Nield, F.R.I.B.A., of Outer Temple, E.C.4.

Soho.—OFFICES.—A block of showrooms and offices is shortly to be erected in Church-street. The contract has been let to Messrs. Sims and Russell, 9, Bloomburg-street, S.W.1. The architects are Messrs. A. S. R. Ley and Son, 214, Bishopsgate, E.C.

Stoke Newington.—GARAGE.—Messrs. G. Ewer and Co., of 78, Leonard-street, E.C.2, are considering the erection of a new motor-coach garage and station.

Streatham. — RECONSTRUCTION. — Messrs. Watney, Combe Reid and Co., Stag Brewery, Westminster, S.W.1, are to rebuild their premises, the Streatham Park Hotel, at Mitcham-lane. The plans have been prepared by the company's staff.

Tooley-street.—OFFICES.—A new block of offices is to be erected for Hays Wharf, Ltd., of Tooley-street, S.E.1. The company have acquired an extensive site having frontages to the Thames and Tooley-street. The plans for the new building have been prepared by Mr. Skidmore, of the Estates' Department, Hays Wharf, Ltd.

Tooting.—OFFICES.—A new block of offices, etc., is to be erected in Blackshaw-road. The architect is Mr. R. A. C. Churchward, 92, Victoria-street, S.W.1.

Wembley.—HOUSES.—Messrs. F. & C. Costin, Ltd., builders, of Kenton-road, Harrow, are to erect 26 houses, 12 in Sedgcombe-avenue and 14 in Woodcock Hill-lane. The address in connection with this paragraph was incorrectly given in our last issue.

Wimbledon.—BUILDINGS.—Plans have been approved by the Wimbledon Borough Council for a workshop building for Messrs. Hugh Stevenson & Sons, Ltd., Wimbledon, S.W. The contractors are Messrs. Robinson & Son, Market Chambers, Enfield. The plans are by Mr. H. St. G. Robinson, M.I.Struct.E., of Wellington-road, Enfield.

NEW CINEMAS

Caernarvon.—A scheme is in hand for the conversion of the "Sportsman's" Hotel into a large cinema for the North Wales Cinema Co., Ltd. The associated architects for the work are Mr. Stewart McLauchlan, architect and surveyor, of 349, Royal Liver-buildings, Liverpool, and Mr. Felix Holt, architect, 14, Dale-street, Liverpool.

East Ham.—Mr. J. R. Wilkins, architect, of 4, Magdalen-street, Oxford, has submitted plans to the East Ham Works Committee showing alterations to form a cinema at the Palais de Danse, Wakefield-street, East Ham.

East Sheen.—We understand that Joseph Mears' Theatres, Ltd., of 5, Hill-street, Richmond, Surrey, propose to demolish the "Sheen" cinema at East Sheen and erect a new house to seat 1,500. Work is expected to start almost at once. The architects are Messrs. Leathart & Granger, FF.R.I.B.A., 7, John-street, Adelphi, W.C.2.

Hull.—The Watch Committee has passed plans submitted by the owners of the Strand Picture Theatre for structural alterations.

Newcastle (Staffs).—The erection of a new cinema is shortly proposed for Mr. R. Beresford. The plans have been prepared by Messrs. Longden & Venables, architects and surveyors, of Stafford-street, Hanley, Stoke-on-Trent.

St. Andrews.—Mr. C. J. McNair, L.R.I.B.A., 112, Bath-street, Glasgow, is architect for alterations to the "Cinema Hall," St. Andrews. A large addition is to be made to the present seating accommodation.

Walthamstow.—Plans have been passed by the Borough Council for alterations to the Queen's Cinema, Hoe-street, Walthamstow, E., for Messrs. Good Bros. The architect is Mr. Trevor J. S. Blake, 102, Station-road, E.4.

RATES OF WAGES IN THE BUILDING TRADE

[Every endeavour is made to ensure accuracy but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Accrington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Aldershot	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Alfreton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2
Alnwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2½
Altrincham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ashford Kent	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Ashington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ashton-under-Lyne	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Aylesbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Aylsham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Banbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Barnsley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Barnstaple	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Barrow-in-Furness	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Barry	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Basingstoke	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bath	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bedford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Berwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bexhill	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Birkenhead	1/9	1/9	1/9	1/10	1/9	1/9	1/9	1/3½
Birmingham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bishop Auckland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Blackburn	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Blackpool	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bognor Regis	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bolton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bournemouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bradford	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bradford-on-Avon	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Braintree	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Brentwood	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bridgwater	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bridlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Brighton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bristol	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bromsgrove	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bromyard	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bungay	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Burnley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Burton-on-Trent	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bury	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Buxton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cambridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Canterbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cardiff	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Carlisle	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chatham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Chelmsford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Cheltenham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chesterfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chorley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Cirencester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Clacton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Cranbrook	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Crewe	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cromer	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Darlington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Deal	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Denbigh	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Derby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Devizes	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Dewsbury	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Doncaster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Dorchester	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Dorking	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Dovercourt	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Driffield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Droitwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Dudley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Durham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Eastbourne	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
E. Glam. Mon. Val.	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ely	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Exeter	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/5½	1/3
Exmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Fakenham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Felixstowe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Folkestone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Frome	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Glossop	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Godalming	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Goole	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Gosport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Grantham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Great Yarmouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Grimsby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Guildford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Halifax	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Harpenden	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Harrogate	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hartlepools	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Harwich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hastings	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hatfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hednesford	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hereford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Herne Bay	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hoddesdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Holt	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Huddersfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hull	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hunstanton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Huntingdon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Isle of Wight	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Ipswich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Keighley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Kettering	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kidderminster	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
King's Lynn	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Lancaster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leamington Spa	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leeds	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leicester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leighton-Buzzard	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Lichfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Lincoln	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Littlehampton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Liverpool	1/9	1/9	1/9	1/10	1/9	1/9	1/9	1/3½
Llandudno	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Llanelly	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
London:								
12 m. radius	1/9	1/9	1/9	1/9	1/9	1/9*	1/9	1/3
12-15 m. radius	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½*	1/8½	1/3½
Loughborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Lowestoft	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Luton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Macclesfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Maidstone	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Malvern	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Manchester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Mansfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Margate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Market Harb'rough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Matlock	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Melton Constable	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Melton Mowbray	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Merthyr Tydfil	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Middlesbrough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Newark	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Newbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newcastle-on-Tyne	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Newcastle-ur-Lyme	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
New Forest	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newmarket	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newport, Mon.	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Northampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Norwich	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Nottingham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Nuneaton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Oakham	1/5½	1/5½	1/5½	1/5½	1/5½	1/6½	1/5½	1/1½
Oldham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Oxford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Paignton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Peterborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Plymouth	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Pontypridd	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Portsmouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Preston	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ramsgate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Reading	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Redcar	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Redditch	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Reigate	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Retford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ripon	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Rochdale	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Rochester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Rugby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Saffron Walden	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
St. Albans	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
St. Helens	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Sawbridgeworth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Saxmundham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Scarborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Sevenoaks	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Sheffield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Shrewsbury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sittingbourne	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Southampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southend-on-Sea	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Southport	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
South Shields	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stevenage	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stockport	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stockton-on-Tees	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stoke-on-Trent	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stourbridge	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stourport	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stowmarket	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Stratford-on-Avon	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stroud	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Sunderland	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Swaffham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Swansea	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Swindon	1/5½	1/5½	1/6½	1/6½	1/5½	1/5½	1/5½	1/2
Tamworth	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Taunton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Thetford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Torquay	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Totnes	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Trowbridge	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Tunbridge Wells	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Uttoxeter	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wakefield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Walsall	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wallsend	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Warminster	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Warrington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Warwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wells (Norfolk)	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Welwyn Gar. City	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
West Bromwich	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Weston-sup.-Mare	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Weymouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Whitby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wigan	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Winchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Windsor	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wisbech	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Wolverhampton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Woodbridge	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Worcester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worksop	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Worthing	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wrexham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wroxham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Wymondham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
York	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½

* The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, is 1/11½ per hour.

For Building Trade wages in Scotland, see page 198.

NATIONAL CERTIFICATES FOR BUILDING

Details of arrangements and conditions for the award of national certificates and diplomas in building to students in technical schools and colleges in England and Wales have been now issued by the Board of Education. The Institute of Builders, in conjunction with the Board, is prepared to approve schemes submitted by technical schools or colleges for the award of certificates and diplomas in general building technology. Certificates will be awarded in respect of part-time grouped courses and diplomas in respect of full-time grouped courses, conducted under approved conditions. The approval of a scheme will depend upon the equipment of the schools, the qualifications of the staff, and the curricula and syllabuses of instruction in the several subjects. The recognition of a school for grant under the Board's Regulations for Further Education will not necessarily imply that the conditions in regard to equipment, staffing, etc., are such as can be accepted for the purposes of this scheme. The standard of the questions set in the final examination and the standard of the marking of the examination scripts will be controlled by assessors appointed for the purpose by the Institute who will act under the joint control of the Institute and the Board. New or revised schemes must be submitted in the first instance by the correspondent of the school or college to the Board, from whom the necessary forms of application and all other forms required under these rules may be obtained. Applications in respect of part-time courses should be made on Form 265T in duplicate, and in respect of full-time courses on Form 266T in duplicate. Such applications should in no case be made later than September 30 in the first school year for which approval is desired. Unless alterations in an approved scheme are proposed by the school, or required by the Institute and the Board, no further application is required. Full details are obtainable from a folder issued by H.M. Stationery Office, price 2d.

BUILDING TRADE WAGES

The trade unions last Friday brought before the National Joint Council of Employers and Operatives an application for the stabilisation of wages for craftsmen at the present level and for an improvement of the rates for the unskilled men. Wage movements have been regulated since the War by a sliding scale in accordance with variations in the cost of living. A reduction of wages by a halfpenny an hour is due to take effect next month. The application of the unions was, therefore, in effect, for the sliding scale to be abolished. The employers objected. They argued that a fundamental alteration of the wages agreement should not be made in this way, but that the normal procedure should be followed. A deadlock having been reached, the Joint Council adjourned. On Tuesday the executive committees of the unions met in London to consider the next step. It was decided to ask for a meeting of the Joint Council as soon as possible, which, it may be taken to be, means that the unions will raise the question of the stabilisation of wages again, but in a manner which does not infringe the standing orders of the Council.

Notice.

The second instalments of "The Land of the Cid," by Mr. D. M. Micklethwaite, and of "Greek Sepulchral Monuments," by Mr. Arnold Whittick, will be given next week.

Calendars.

We acknowledge with thanks the receipt of calendars from the following:—Leforest Tile Co., Ltd.; Ragusa Asphalte Paving Co., Ltd.; Chas P. Kinnell & Co., Ltd.; Lewis E. Nunn; E. B. Holmes & Co., Ltd.; Dorman, Long & Co., Ltd.; Robert K. Burt; C. Isler & Co., Ltd.; B. T. King; W. H. Willcox & Co., Ltd.; and Will F. Taylor.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A. Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

JANUARY 20.

Bridgnorth.—Dwellings.—Six non-parlour, for T.C. B.S.

Clacton-on-Sea.—Alterations.—Also additions to conveniences, Lower Promenade, West Cliff, for U.D.C. W. Aiston, S.

Clevedon.—Pavilion.—Erection of a pavilion, the main construction to be steel framing and Ashlar stonework, for U.D.C. Inon J. Leach, Clevedon, Somerset.

Dundee.—Gates.—Wrought iron gates to close main and east archways of Royal Arch, Dock-st., for Harbour Trust. J. H. Thompson, General Manager and Engineer, Dundee Harbour Trust.

Dunmurry.—School.—For Lisburn and Belfast Regional Education Committee. Acheson Ferguson, F.S.I., chartered surveyor, 2, Wellington-place, Belfast. Dep. £5.

East Preston.—Repairs.—Front door porches and repairs and exterior painting to cottages at Rustington and Clapham, for R.D.C. R. E. Booker, building surveyor.

Finedon.—Houses.—4 houses on the Burton-rd., Finedon, for U.D.C. S., Town Hall.

Goole.—Fencing.—At playing fields at Secondary school, for West Riding E.C. Education Officer, County Hall, Wakefield.

Haverfordwest.—Houses.—Thirty-two, for T.C. D. F. Ingleton, Lic.R.I.B.A., Victoria-place. Dep. £2 2s.

Letchworth.—Houses.—50 non-parlour, near Icknield-way, for U.D.C. G. Brown, clerk. Dep. £2 2s.

Liverpool.—School.—Richmond-ter., Anfield, for T.C. Land Steward and Surveyor. Dep. £2 2s.

Plymouth.—Housing.—Repairs to premises at No. 13, Notte-st., Plymouth, for C.B. Medical Officer of Health (Housing) Department, Town Hall, Stonehouse, Plymouth.

Standish.—Demolition.—Properties in Market-place street improvements, mason's and other accommodation works, for U.D.C. A. A. Smith, S. Dep. £2 2s.

York.—Excavation.—In connection with bus garage at Fulford Car sheds, for T.C. F. W. Spurr, City E.

JANUARY 21.

Belfast.—Installation.—Of electric lighting system in alterations and additions to Nurses' Home, Infirmary, for B.G. R. H. Wilson, clerk.

Birr.—Houses.—20, for U.D.C. Higginbotham & Stafford, 3, Clare-st., Dublin.

Ealing.—Conversion.—Of Islips Manor, Northolt, to Health Centre, for T.C. W. R. Hicks, M.Inst. C.E., F.S.I. B.E., Town Hall, Ealing, W.5.

Glasgow.—Garage.—Extension of Larkfield bus garage, for T.C. D. Stenhouse, T.C.

Haverton Hill-on-Tees.—Houses.—On Clarence-rd. estate, for U.D.C. Kitching & Archibald, architects, 21, Albert-rd., Middlesbrough.

Leicester.—Pavilion.—Erection of a pavilion on the playing fields of the Colleges of Art and Technology, situated off Blackbird-rd., for E.C. Education Surveyor's Office, Newarke House, The Newarks, Leicester. Dep. £1 1s.

Newport, Mon.—Alterations.—To Pill Baths, to form an Employment Exchange, for the Commissioners, H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Old Fletton.—School.—Elementary school at Woodston, for Hunts E.C. County Surveyor, Walden House, Huntingdon.

Paulton.—Additions.—Also improvements to Church of England school, for Managers. A. J. Pictor, F.R.I.B.A., architect, 14, Queen-sq., Bath.

Rotherham.—Houses.—440, on Herringthorpe site, for C.B. V. Turner, B.E. Dep. £2 2s.

South Dublin.—Cottages.—(a) External weather-proofing to 20 cottages at site 241, Tallagh; (b) repairs and painting of gutters to 12 houses at site 268a, Saint Laurence, Chapelizod, for R.D.C. G. Gallagher, clerk.

Tottenham.—Public Convenience.—Erection of, for U.D.C. Clerk and Solicitor of the Council, Town Hall, Tottenham, N.15. Dep. £2.

Worksop.—Wiring.—For electricity, 26 houses at North Carlton, for R.D.C. S.

JANUARY 22.

Belfast.—Convenience.—Public sanitary convenience in Albert-sq., for T.C. R. B. Donald M.Inst. C.E., Architectural Department, Room 91, City Hall. Dep. £2 2s.

Brentford.—Building.—Steam disinfector at West Middlesex Hospital, Isleworth, for B.G. F. E. Harmsworth, clerk, Teolands House, 34, Twickenham-rd., Isleworth.

Ellesmere Port.—New School.—Erection of, for Cheshire C.C. County Architect, Newgate-street, Chester. Dep. £2 2s.

Greenwich.—Building.—Construction, on land at the rear of No. 105, Shooters Hill-rd., Blackheath, of a building to be used as a combined infant welfare and artificial sunlight treatment centre, together with certain other works of adaptation, for T.C. B.E. and S.'s Department, Royal Hill, Greenwich, S.E.10. Dep. £2 2s.

Hull.—Fencing.—Wood fencing at Malet Lambert school site, Ings-rd., for E.C. R. C. Moore, Director of Education.

Hull.—Installation.—Electric light installation and fittings required for first portion of Enstfield-rd. school, for T.C. D. Harvey, A.R.I.B.A., City Architect. Dep. £1 1s

Hull.—Installation.—Low pressure heating installation and also domestic hot water supply apparatus for open-air school, Cottingham-rd., for T.C. D. Harvey, A.R.I.B.A., City Architect. Dep. £1 1s.

Hull.—Alterations.—At Technical College, for E.C. R. C. Moore, Director of Education.

Kendal.—Houses.—Erection of 60 houses, for Castle-rd. estate, for T.C. B.S.'s Office, Town Hall, Kendal. Dep. £2 2s.

Kent and Surrey.—Building.—(1) Formation of new piggeries at Darenth Training Colony, Dartford, Kent; (2) Provision of new gate office and cycle shed at Belmont Laboratories, Belmont, Sutton, Surrey; for M.A.B. T. Cooper, M.Inst.C.E., M.I.Mech. E., Engineer-in-Chief. Dep. £1 1s. each.

London.—Rooms.—Handicraft rooms at Napier and Central Park schools, and for handicraft and domestic subjects rooms at Cornwell school, Walton-rd., Manor Park, E.12, for East Ham E.C. A. T. Bridgewater, B.E. Dep. 10s. 6d. each.

Solihull.—Telephone Exchange.—Erection of for the Commissioners, H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Upton.—Building.—New police station at Upton, near Birkenhead, for Cheshire C.C. F. Anstead Browne, F.R.I.B.A., County Architect, Newgate-st., Chester. Dep. £2 2s.

JANUARY 23.

Aylesbury.—Building.—Baptist Church and schoolroom, Penn-rd., Southcourt. F. B. Howard & Sons, architects and surveyors, County Estate Office, Station-rd., Chesham.

Hull.—Office.—Temporary office building in Hanover-sq., for T.C. D. Harvey, A.R.I.B.A., City Architect. Dep. £2 2s.

Liverpool.—Shelter.—Tramway passenger shelter, junction Carisbrooke-rd. and County-rd., Walton, for T.C. General Manager, Liverpool Corporation Tramways, 24, Hatton-garden.

Pendleton.—Telephone Exchange.—Erection of, for the Commissioners, H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Reading.—237 houses.—Erection of, on the Whitley Housing Estate, for the Corporation. Town Clerk, Town Hall, Reading. Dep. £2 2s.

JANUARY 24.

Campbeltown.—Houses.—Four blocks of houses, each containing four houses of three apartments and four blocks of houses each containing four houses of two apartments, at Castleacres, for T.C. Thomson & Son, architects, 7, Victoria-place, Airdrie.

Dover.—Submarine Cable Jetty.—(R.C. erection of, for the Commissioners, H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Formby.—Housing.—20 non-parlour type houses at New-rd., Formby, for U.D.C. E. K. Gollan, M.Inst.M. and Cy.E., Council Offices, Formby.

Glasgow.—Heating.—Installation in new school at Drumoyne, for E.C. R. Burns, Executive Officer. Dep. £1 1s.

Hoddesdon.—Houses.—Seven houses at Rye Park, Hoddesdon, for U.D.C. William Plumpton, Council Offices, High-st., Hoddesdon, Herts. Dep. £1 1s.

Near Wednesbury.—Relaying.—Taking up ward floor at Moxley Hospital, near Wednesbury, and relaying in approved material, for South Staffordshire Joint Smallpox Hospital Board. H. B. Robinson, B.E. and S., Town Hall, Wolverhampton.

Purfleet.—Housing Scheme.—90 non-parlour houses and the necessary roadwork and sewers, for U.D.C. John L. Davies, M.Inst.M. & Cy.E., F.S.I., etc., E. and S., Council Offices, Purfleet, Essex. Dep. £2 2s.

Shrewsbury.—Repairs.—Artificers' works contract for Cardiff and outstations, for War Department. G. M. Morrell, Lieut-Colonel, R.E., Commander Royal Engineers, Welsh Area. R.E. Office, Belle Vue-rd., Shrewsbury.

JANUARY 25.

Chingford.—Repairs.—At 6, Templeton-av., for the U.D.C. Clerk to the Council, Town Hall, Chingford. Dep. £1.

Felixstowe.—Houses.—9, in Chapel-lane, for U.D.C. H. Clegg, E. and S. Dep. £5.

Ilford.—School.—Temporary school building at Golfe-rd., for T.C. L. E. J. Reynolds, Architect to E.C. Dep. £1 1s.

RATES OF WAGES IN THE BUILDING TRADE

[Every endeavour is made to ensure accuracy but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Accrington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Aldershot	1/4	1/4	1/4	1/4	1/4	1/6	1/4	1/0
Alfreton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Alnwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Altrincham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ashford Kent	1/4	1/4	1/4	1/4	1/4	1/6	1/4	1/0
Ashington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ashton-under-Lyne	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Aylesbury	1/4	1/6	1/4	1/4	1/4	1/4	1/4	1/0
Aylsham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Banbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/2
Barnsley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Barnstaple	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Barrow-in-Furness	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Barry	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Basingstoke	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bath	1/5½	1/5½	1/5½	1/5½	1/5½	1/6½	1/5½	1/1½
Bedford	1/5½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Berwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/0½
Bexhill	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½
Birkenhead	1/9	1/9	1/9	1/10	1/9	1/9	1/9	1/2½
Birmingham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bishop Auckland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2
Blackburn	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Blackpool	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bognor Regis	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bolton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bournemouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bradford	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bradford-on-Avon	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Braintree	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Brentwood	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bridgwater	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bridlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Brighton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bristol	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bromsgrove	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bromyard	1/3½	1/3½	1/3½	1/3	1/3½	1/3½	1/3½	11½
Bungay	1/3	1/3	1/2	1/3	1/3	1/3	1/3	11½
Burnley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Burton-on-Trent	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2
Buxton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cambridge	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Canterbury	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Cardiff	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Carlisle	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chatham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Chelmsford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Cheltenham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chesterfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chorley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Cirencester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Clacton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/2½
Coventry	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Cranbrook	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Crewe	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cromer	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Darlington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Deal	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Denbigh	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Derby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Devizes	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Dewsbury	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Doncaster	1/4	1/4	1/4	1/4	1/4	1/5	1/5	1/0½
Dorchester	1/5	1/5	1/5	1/5	1/5	1/6	1/6	1/0½
Dorking	1/5	1/5	1/5	1/5	1/5	1/6	1/6	1/1½
Dovercourt	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Driffield	1/6	1/6	1/6	1/6	1/6	1/7	1/7	1/2½
Droitwich	1/7	1/7	1/7	1/7	1/7	1/7½	1/7½	1/2½
Dudley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Durham	1/5½	1/5½	1/5½	1/5½	1/5½	1/7	1/5½	1/2½
Eastbourne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/0
E. Glam. (Mon. Val.)	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/2
Ely	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/0½
Exeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0
Exmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/1½
Fakenham	1/5½	1/5½	1/5½	1/5½	1/4½	1/5½	1/4½	1/0½
Felixstowe	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0
Folkestone	1/4	1/4	1/4	1/4	1/4	1/7½	1/4	1/2½
Frome	1/7½	1/7½	1/7½	1/7½	1/7½	1/6	1/7½	1/1½
Glossop	1/6	1/6	1/6	1/6	1/4½	1/6½	1/6	1/0½
Gloucester	1/4½	1/4½	1/4½	1/4½	1/6½	1/6½	1/6½	1/2
Godalming	1/6½	1/6½	1/6½	1/6½	1/6	1/6	1/6	1/1½
Goole	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/0
Gosport	1/6	1/6	1/6	1/6	1/5	1/6	1/5	1/0
Grantham	1/5	1/5	1/5	1/5	1/5	1/7½	1/7½	1/2
Great Yarmouth	1/7½	1/7½	1/7½	1/7½	1/5	1/5	1/5	1/0
Grimsby	1/5	1/5	1/5	1/5	1/5	1/7½	1/7½	1/2
Guildford	1/7½	1/7½	1/7½	1/7½	1/5	1/5	1/5	1/0
Halifax	1/5	1/5	1/5	1/5	1/5	1/7½	1/7½	1/2½
Harpenden	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Harrogate	1/7½	1/7½	1/7½	1/7½	1/5	1/5	1/5	1/0½
Hartlepools	1/5	1/5	1/5	1/5	1/4½	1/4½	1/4½	1/0½
Harwich	1/4½	1/4½	1/4½	1/4½	1/6	1/6	1/6	1/1½
Hastings	1/6	1/6	1/6	1/6	1/6½	1/6½	1/6½	1/2
Hatfield	1/6½	1/6½	1/6½	1/6½	1/5½	1/5½	1/4½	1/1½
Hednesford	1/5½	1/5½	1/5½	1/5½	1/4	1/4	1/4	1/0
Hereford	1/4	1/4	1/4	1/4	1/4	1/5	1/5	1/0½
Herne Bay	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/5	1/5	1/5	1/5	1/5	1/3	1/3	11½
Hoddesdon	1/3	1/3	1/3	1/3	1/3	1/7½	1/7½	1/2½
Holt	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Huddersfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hull	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Hunstanton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0
Huntingdon	1/4	1/4	1/4	1/4	1/4	1/5½	1/5½	1/1½
Isle of Wight	1/5½	1/5½	1/5½	1/5½	1/5½	1/7½	1/5½	1/2½
Ipswich	1/7½	1/7½	1/7½	1/7½	1/7½	1/6	1/6	1/1½
Keighley	1/6	1/6	1/6	1/6	1/6	1/6½	1/6½	1/2
Kettering	1/6½	1/6½	1/6½	1/6½	1/6½	1/4½	1/4½	1/0½
Kidderminster	1/4½	1/4½	1/4½	1/4½	1/4½	1/7½	1/7½	1/2½
King's Lynn	1/4½	1/7½	1/7½	1/7½	1/7½			
Lancaster	1/7½							

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Leamington Spa	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leeds	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leicester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leighton-Buzzard	1/4	1/4	1/4	1/4	1/4	1/6	1/4	1/0½
Lichfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Lincoln	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Liverpool	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Llandudno	1/9	1/9	1/9	1/10	1/9	1/9	1/9	1/3½
Llanelly	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
London:	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
12 m. radius	1/9	1/9	1/9	1/0*	1/9	1/9	1/9	1/3
12-15 m. radius	1/8½	1/8½	1/8½	1/8½*	1/8½	1/8½	1/8½	1/2½
Loughborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Lowestoft	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Luton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Macclesfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2
Maidstone	1/5	1/5	1/5	1/6	1/5	1/6	1/5	1/0½
Malvern	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Manchester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Mansfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Margate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Market Harb'rough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Matlock	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Melton Constable	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Melton Mowbray	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Merthyr Tydfil	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Middlesbrough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Newark	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Newbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newcastle-on-Tyne	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Newcastle-u.-Lyme	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
New Forest	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newmarket	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newport, Mon.	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Northampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2
Norwich	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Nottingham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Nuneaton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oakham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Oldham	1/6	1/7	1/6	1/7	1/6	1/6	1/6	1/1½
Oxford	1/7	1/7	1/6	1/7	1/6	1/7	1/6	1/1½
Paignton	1/6	1/6	1/6	1/7½	1/6	1/7½	1/6	1/1½
Peterborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Plymouth	1/7	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Pontypridd	1/6	1/6	1/6	1/6	1/6	1/7½	1/6	1/2
Portsmouth	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Preston	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Ramsgate	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/2
Reading	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Redcar	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Redditch	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Reigate	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Retford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ripon	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Rochdale	1/5	1/5	1/5	1/5	1/5	1/7½	1/5	1/0½
Rochester	1/5	1/5	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Rugby	1/7½	1/7½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½
Saffron Walden	1/3½	1/3½	1/6	1/6	1/6	1/6	1/6	1/2½
St. Albans	1/6	1/6	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
St. Helens	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Sawbridgeworth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Saxmundham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Scarborough	1/5	1/5	1/5	1/5	1/5	1/7½	1/5	1/0½
Sevenoaks	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Sheffield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2½
Shrewsbury	1/4	1/4	1/4	1/4	1/4	1/6	1/4	1/0½
Sittingbourne	1/6	1/6	1/6	1/6	1/6	1/6½	1/6	1/2
Southampton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2½
Southend-on-Sea	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Southport	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
South Shields	1/5	1/5	1/5	1/5	1/5	1/7½	1/5	1/0½
Stevenage	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stockport	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stockton-on-Tees	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stoke-on-Trent	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2½
Stourbridge	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2½
Stourport	1/4	1/4	1/4	1/6	1/4	1/4	1/4	1/0½
Stowmarket	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stratford-on-Avon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stroud	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Sunderland	1/2	1/3	1/3	1/3	1/3	1/7½	1/3	1/1½
Swaffham	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/5½	1/0½
Swansea	1/5½	1/5½	1/5½	1/6½	1/5½	1/5½	1/5½	1/0
Swindon	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Tamworth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1½
Taunton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Thetford	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Torquay	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/1½
Totnes	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Trowbridge	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0
Tunbridge Wells	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/2
Uttoxeter	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Wakefield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Walsall	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Wallsend	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Warminster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Warrington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2½
Warwick	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/0½
Wells (Norfolk)	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Welwyn Gar. City	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
West. Bromwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/2½
Weston-sup.-Mare	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Weymouth	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Whitby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Wigan	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Winchester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Windsor	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/2
Wisbech	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Wolverhampton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Woodbridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/0½
Worcester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worksop	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Worthing	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wrexham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/1½
Wroxham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/2
Wymondham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/0½
York	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½

* The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, is 1/11½ per hour.

For Building Trade wages in Scotland, see page 196.

NATIONAL CERTIFICATES FOR BUILDING

Details of arrangements and conditions for the award of national certificates and diplomas in building to students in technical schools and colleges in England and Wales have been now issued by the Board of Education. The Institute of Builders, in conjunction with the Board, is prepared to approve schemes submitted by technical schools or colleges for the award of certificates and diplomas in general building technology. Certificates will be awarded in respect of part-time grouped courses and diplomas in respect of full-time grouped courses, conducted under approved conditions. The approval of a scheme will depend upon the equipment of the schools, the qualifications of the staff, and the curricula and syllabuses of instruction in the several subjects. The recognition of a school for grant under the Board's Regulations for Further Education will not necessarily imply that the conditions in regard to equipment, staffing, etc., are such as can be accepted for the purposes of this scheme. The standard of the questions set in the final examination and the standard of the marking of the examination scripts will be controlled by assessors appointed for the purpose by the Institute who will act under the joint control of the Institute and the Board. New or revised schemes must be submitted in the first instance by the correspondent of the school or college to the Board, from whom the necessary forms of application and all other forms required under these rules may be obtained. Applications in respect of part-time courses should be made on Form 265T in duplicate, and in respect of full-time courses on Form 266T in duplicate. Such applications should in no case be made later than September 30 in the first school year for which approval is desired. Unless alterations in an approved scheme are proposed by the school, or required by the Institute and the Board, no further application is required. Full details are obtainable from a folder issued by H.M. Stationery Office, price 2d.

BUILDING TRADE WAGES

The trade unions last Friday brought before the National Joint Council of Employers and Operatives an application for the stabilisation of wages for craftsmen at the present level and for an improvement of the rates for the unskilled men. Wage movements have been regulated since the War by a sliding scale in accordance with variations in the cost of living. A reduction of wages by a halfpenny an hour is due to take effect next month. The application of the unions was, therefore, in effect, for the sliding scale to be abolished. The employers objected. They argued that a fundamental alteration of the wages agreement should not be made in this way, but that the normal procedure should be followed. A deadlock having been reached, the Joint Council adjourned. On Tuesday the executive committees of the unions met in London to consider the next step. It was decided to ask for a meeting of the Joint Council as soon as possible, which, it may be taken to be, means that the unions will raise the question of the stabilisation of wages again, but in a manner which does not infringe the standing orders of the Council.

Notice.

The second instalments of "The Land of the Cid," by Mr. D. M. Micklethwaite, and of "Greek Sepulchral Monuments," by Mr. Arnold Whittick, will be given next week.

Calendars.

We acknowledge with thanks the receipt of calendars from the following:—Leforest Tile Co., Ltd.; Ragusa Asphalte Paving Co., Ltd.; Chas P. Kinnell & Co., Ltd.; Lewis E. Nunn; W. B. Holmes & Co., Ltd.; Dorman, Long & Co., Ltd.; Robert K. Burt; C. Isler & Co., Ltd.; B. T. King; W. H. Willcox & Co., Ltd.; and Will F. Taylor.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A. Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

JANUARY 20.

Bridgnorth.—Dwellings.—Six non-parlour, for T.C. B.S.

Clacton-on-Sea.—Alterations.—Also additions to conveniences, Lower Promenade, West Cliff, for U.D.C. W. Aiston, S.

Clevedon.—Pavilion.—Erection of a pavilion, the main construction to be steel framing and Ashlar stonework, for U.D.C. Inon J. Leach, Clevedon, Somerset.

Dundee.—Gates.—Wrought iron gates to close main and east archways of Royal Arch, Dock-st., for Harbour Trust. J. H. Thompson, General Manager and Engineer, Dundee Harbour Trust.

Dunmurry.—School.—For Lisburn and Belfast Regional Education Committee. Acheson Ferguson, F.S.I., chartered surveyor, 2, Wellington-place, Belfast. Dep. £5.

East Preston.—Repairs.—Front door porches and repairs and exterior painting to cottages at Rustington and Clapham, for R.D.C. R. E. Booker, building surveyor.

Finedon.—Houses.—4 houses on the Burton-rd., Finedon, for U.D.C. S., Town Hall.

Goole.—Fencing.—At playing fields at Secondary school, for West Riding E.C. Education Officer, County Hall, Wakefield.

Haverfordwest.—Houses.—Thirty-two, for T.C. D. F. Ingleton, Lic.R.I.B.A., Victoria-place. Dep. £2 2s.

Letchworth.—Houses.—50 non-parlour, near Icknield-way, for U.D.C. G. Brown, clerk. Dep. £2 2s.

Liverpool.—School.—Richmond-ter., Anfield, for T.C. Land Steward and Surveyor. Dep. £2 2s.

Plymouth.—Housing.—Repairs to premises at No. 13, Notte-st., Plymouth, for C.B. Medical Officer of Health (Housing) Department, Town Hall, Stonehouse, Plymouth.

Standish.—Demolition.—Properties in Market-place street improvements, mason's and other accommodation works, for U.D.C. A. A. Smith, S. Dep. £2 2s.

York.—Excavation.—In connection with bus garage at Fulford Car sheds, for T.C. F. W. Spurr, City E.

JANUARY 21.

Belfast.—Installation.—Of electric lighting system in alterations and additions to Nurses' Home, Infirmary, for B.G. R. H. Wilson, clerk.

Birr.—Houses.—20, for U.D.C. Higginbotham & Stafford, 3, Clare-st., Dublin.

Ealing.—Conversion.—Of Islips Manor, Northolt, to Health Centre, for T.C. W. R. Hicks, M.Inst. C.E., F.S.I. B.E., Town Hall, Ealing, W.5.

Glasgow.—Garage.—Extension of Larkfield bus garage, for T.C. D. Stenhouse, T.C.

Haverton Hill-on-Tees.—Houses.—On Clarence-rd. estate, for U.D.C. Kitching & Archibald, architects, 21, Albert-rd., Middlesbrough.

Leicester.—Pavilion.—Erection of a pavilion on the playing fields of the Colleges of Art and Technology, situated off Blackbird-rd., for E.C. Education Surveyor's Office, Newarke House, The Newarks, Leicester. Dep. £1 1s.

Newport, Mon.—Alterations.—To Pill Baths, to form an Employment Exchange, for the Commissioners, H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Old Fletton.—School.—Elementary school at Woodston, for Hunts E.C. County Surveyor, Walden House, Huntingdon.

Paulton.—Additions.—Also improvements to Church of England school, for Managers. A. J. Pictor, F.R.I.B.A., architect, 14, Queen-sq., Bath.

Rotherham.—Houses.—440, on Herringthorpe site, for C.B. V. Turner, B.E. Dep. £2 2s.

South Dublin.—Cottages.—(a) External weather-proofing to 20 cottages at site 241, Tallagh; (b) repairs and painting of gutters to 12 houses at site 208a, Saint Laurence, Chapelizod, for R.D.C. G. Gallagher, clerk.

Tottenham.—Public Convenience.—Erection of, for U.D.C. Clerk and Solicitor of the Council, Town Hall, Tottenham, N.15. Dep. £2.

Worksop.—Wiring.—For electricity, 26 houses at North Carlton, for R.D.C. S.

JANUARY 22.

Belfast.—Convenience.—Public sanitary convenience in Albert-sq., for T.C. R. B. Donald M.Inst. C.E., Architectural Department, Room 91, City Hall. Dep. £2 2s.

Brentford.—Building.—Steam disinfector at West Middlesex Hospital, Isleworth, for B.G. F. E. Harmsworth, clerk, Toolands House, 34, Twickenham-rd., Isleworth.

Ellesmere Port.—New School.—Erection of, for Cheshire C.C. County Architect, Newgate-street, Chester. Dep. £2 2s.

Greenwich.—Building.—Construction, on land at the rear of No. 105, Shooters Hill-rd., Blackheath, of a building to be used as a combined infant welfare and artificial sunlight treatment centre, together with certain other works of adaptation, for T.C. B.E. and S.'s Department, Royal Hill, Greenwich, S.E.10. Dep. £2 2s.

Hull.—Fencing.—Wood fencing at Malet Lambert school site, Ings-rd., for E.C. R. C. Moore, Director of Education.

Hull.—Installation.—Electric light installation and fittings required for first portion of Eastfield-rd. school, for T.C. D. Harvey, A.R.I.B.A., City Architect. Dep. £1 1s.

Hull.—Installation.—Low pressure heating installation and also domestic hot water supply apparatus for open-air school, Cottingham-rd., for T.C. D. Harvey, A.R.I.B.A., City Architect. Dep. £1 1s.

Hull.—Alterations.—At Technical College, for E.C. R. C. Moore, Director of Education.

Kendal.—Houses.—Erection of 60 houses, for Castle-rd. estate, for T.C. B.S.'s Office, Town Hall, Kendal. Dep. £2 2s.

Kent and Surrey.—Building.—(1) Formation of new piggeries at Darenth Training Colony, Dartford, Kent; (2) Provision of new gate office and cycle shed at Belmont Laboratories, Belmont, Sutton, Surrey; for M.A.B. T. Cooper, M.Inst.C.E., M.I.Mech. E., Engineer-in-Chief. Dep. £1 1s. each.

London.—Rooms.—Handicraft rooms at Napier and Central Park schools, and for handicraft and domestic subjects rooms at Cornwell school, Walton-rd., Manor Park, E.12, for East Ham E.C. A. T. Bridgewater, B.E. Dep. 10s. 6d. each.

Solihull.—Telephone Exchange.—Erection of for the Commissioners, H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Upton.—Building.—New police station at Upton, near Birkenhead, for Cheshire C.C. F. Anstead Browne, F.R.I.B.A., County Architect, Newgate-st., Chester. Dep. £2 2s.

JANUARY 23.

Aylesbury.—Building.—Baptist Church and schoolroom, Penn-rd., Southcourt. F. E. Howard & Sons, architects and surveyors. County Estate Office, Station-rd., Chesham.

Hull.—Office.—Temporary office building in Hanover-sq., for T.C. D. Harvey, A.R.I.B.A., City Architect. Dep. £2 2s.

Liverpool.—Shelter.—Tramway passenger shelter, junction Carisbrooke-rd. and County-rd., Walton, for T.C. General Manager, Liverpool Corporation Tramways, 24, Hatton-garden.

Pendleton.—Telephone Exchange.—Erection of, for the Commissioners, H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Reading.—237 houses.—Erection of, on the Whitley Housing Estate, for the Corporation. Town Clerk, Town Hall, Reading. Dep. £2 2s.

JANUARY 24.

Campbeltown.—Houses.—Four blocks of houses, each containing four houses of three apartments and four blocks of houses each containing four houses of two apartments, at Castleacres, for T.C. Thomson & Son, architects, 7, Victoria-place, Airdrie.

Dover.—Submarine Cable Jetty.—(R.C. erection of, for the Commissioners, H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Formby.—Housing.—20 non-parlour type houses at New-rd., Formby, for U.D.C. E. K. Gollan, M.Inst.M. and Cy.E., Council Offices, Formby.

Glasgow.—Heating.—Installation in new school at Drumoyne, for E.C. R. Burns, Executive Officer. Dep. £1 1s.

Hoddesdon.—Houses.—Seven houses at Rye Park, Hoddesdon, for U.D.C. William Plumpton, Council Offices, High-st., Hoddesdon, Herts. Dep. £1 1s.

Near Wednesbury.—Relaying.—Taking up ward floor at Moxley Hospital, near Wednesbury, and relaying in approved material, for South Staffordshire Joint Smallpox Hospital Board. H. B. Robinson, B.E. and S., Town Hall, Wolverhampton.

Purfleet.—Housing Scheme.—90 non-parlour houses and the necessary roadwork and sewers, for U.D.C. John L. Davies, M.Inst.M. & Cy.E., F.S.I., etc., E. and S., Council Offices, Purfleet, Essex. Dep. £2 2s.

Shrewsbury.—Repairs.—Artificers' works contract for Cardiff and outstations, for War Department. G. M. Morrell, Lieut-Colonel, R.E., Commander Royal Engineers, Welsh Area. R.E. Office, Belle Vue-rd., Shrewsbury.

JANUARY 25.

Chingford.—Repairs.—At 6, Templeton-av., for the U.D.C. Clerk to the Council, Town Hall, Chingford. Dep. £1.

Felixstowe.—Houses.—9, in Chapel-lane, for U.D.C. H. Clegg, E. and S. Dep. £5.

Ilford.—School.—Temporary school building at Golfe-rd., for T.C. L. E. J. Reynolds, Architect to E.C. Dep. £1 1s.

Newmarket.—Houses.—(a) 3 pairs houses at Cheveley (allotments site); (b) 4 pairs houses at Ashley; (c) 8-pairs houses at Fordham-rd., Soham; (d) 12 pairs bungalows at Fordham-rd., Soham, for R.D.C. A. E. Austin, 4, Hills View, Great Shefford, Cambs. Dep. £1.

Gainsborough.—Additions.—Also alterations to "Hillside," St. Mary's-lane, as company headquarters for 312th Anti-Aircraft Searchlight Co., R.E., of Territorial Army Association, County of Essex, Hugo R. Bird, L.R.I.B.A., chartered architect, Brentwood. Dep. £2 2s.

JANUARY 27.

***Harold Wood, Essex.**—Hospital Buildings.—For the C.B. of West Ham, Town Clerk, Town Hall, West Ham, E.15. Dep. £1.

Huddersfield.—Urinal.—Erection of public urinal in Leeds-rd., Huddersfield, for C.B. B.E., 1, Peel st., Huddersfield.

Kingston-upon-Hull.—Fencing.—Wood fencing along boundaries of Wolfreton-lane and Swine Bank extension, length 3,760 yds.; Loatley's-lane length 6,740 yds.; Endyke-lane, length 5,220 yds.; Hall-rd. extension, length 2,100 yds., for T.C. T. Thomas, City E.

Littlehampton.—Store.—Store and lavatory on site adjacent to swing bridge, for U.D.C. S.

Maidstone.—New Offices.—Erection of, for the Corporation. Town Clerk, Town Clerk's Offices, King-st., Maidstone. Dep. £2 2s.

New York.—Houses.—Poultry houses and runs to accommodate a thousand birds, at Farm Institute, Askham Bryan, near York, for Yorkshire Council for Agricultural Education. Joint Clerks, County Hall, Beverley. Dep. £1.

Sandgate.—Dressing-room.—Also internal and external decorations at Chichester Hall, High-st., for U.D.C. J. A. Woodgate, S. Dep. 2s. 2s.

***Southampton.**—Houses.—Erection of 328 houses on the Rowsham-road housing site, for the Corporation. Town Clerk's Office, Municipal Offices. Dep. £4 4s.

JANUARY 28.

Croydon.—Heating.—Rearrangement of steam boilers and heating at the National Aircraft factory, Waddon, Croydon, for H.M.O.W. Contracts Branch. Dep. £1 1s.

Kingston.—Rebuilding.—Certain work in connection with rebuilding three chimney stacks on roof of administrative block at Kingston and District Hospital, Kingston Hill. For B.G. W. Taylor clerk.

Leeds.—Fencing.—Wrought-iron fencing at Low Moor Side, Holbeck, and Mill Green, for T.C. J. E. Acfield, City E.

JANUARY 29.

Belfast.—Demolition.—Of existing buildings and erection of business premises at corner of Grosvenor-rd. and Durham-st. H. Gault, architect and civil engineer, 13, Donegall-sq. North.

Glutton.—Electric Light.—At 55 houses, for the R.D.C. J. Mayne-Morgan, 6, Church-rd., Whitchurch, Cardiff.

Cowdenbeath.—Housing Scheme.—Various trades for the erection of 32 houses at Randolph-st., Cowdenbeath, for T.C. C. A. Alexander, B.S., Town House, Cowdenbeath. Dep. £2 2s.

Rhiconich.—Rebuilding.—Rebuilding and improving police station at Rhiconich, Eddrachilles, for Sutherland C.C. Horne & Murray, architects, Golspie.

JANUARY 30.

***Birmingham.**—Demolition, etc.—At Colmore Telephone Exchange, for H.M.O.W. Contracts Branch, King Charles-street, S.W.1. Dep. £1 1s.

JANUARY 31.

Arbroath.—Additions.—Also alterations, Arbroath High school, for Forfarshire E.C. Master of Works, Education Offices, Forfar.

Bristol.—Houses.—304 on Bedminster housing site, for T.C. L. S. McKenzie, City E. and S., 51, Princes st. Dep. £1.

Didcot.—School.—Erection of, for the Berkshire E.C. W. C. F. Anderson, Education Secretary, Shire Hall, Reading. Dep. £2 2s.

***London, S.W.**—External and Internal Painting.—For the Commissioners, H.M.O.W. Contracts Branch, King Charles-street, S.W.1. Dep. £1 1s.

March.—Extensions.—To the Grammar School, for the Isle of Ely E.C. E. J. P. Osborne, Director of Education, Education Offices, March. Dep. £2 2s.

Looe.—Garage.—Garage, with 2 flats over same, at West Looe-sq. J. & F. Bassett, West Looe.

FEBRUARY 1.

Gt. Yarmouth.—Housing Scheme.—60 houses on the North Denes Estate, for C.B. B.E., Town Hall, Gt. Yarmouth. Dep. £2 2s.

***Swindon.**—Maternity Hospital.—Erection of, for the Corporation. Town Clerk, Town Hall. Dep. £2 2s.

***Welwyn Garden City.**—200 Houses.—Erection of, for the U.D.C. T. J. Osborn, Clerk, Council Offices. Dep. £2 2s.

FEBRUARY 3.

Belfast.—Wall.—Stone boundary wall and gate piers at property known as "Beechgroove," Holywood-rd., for T.C. City Surveyor, Room 91, Architectural Department, City Hall.

Bristol.—Convenience.—At St. Matthias-park, for T.C. L. S. McKenzie, City E. and S., 63, Queen-sq., Dep. £2 2s.

***Gravesend.**—Houses.—Erection of 32 parlour type houses on King's Farm Estate, for the Corporation. Town Clerk, 4, Woodville Terrace. Dep £2 2s.

King's Lynn.—Building.—Classrooms and other improvements to Highgate Council school, for E.C. Allfitt & Courtney, architects, Tuesday Market-pl. Dep. £2 2s.

Newcastle-upon-Tyne.—Schools.—Large Central schools (1,000 scholars) on site having frontage to Middle-st., Walker, for E.C. Thos. Walling, Director of Education, Northumberland-rd. Dep. £5

Sutton and Cheam.—Lavatories.—At The Green, High-st., Sutton, for U.D.C. W. Hedley Grieves, S. Dep. £2 2s.

***Sunderland.**—Houses.—Erection of, for the U.D.C. Clerk to the Council, Council Offices. Dep. £2 2s.

Torquay.—Alterations and Additions.—To Livermead House Hotel, for Messrs. Livermead House Hotel, Ltd. Francis C. R. Johnson, architect, Barn Studio, Brixham. Dep. £2 2s

FEBRUARY 4.

***Rowley Regis.**—Maternity and Child Welfare Establishment.—Erection of, for the U.D.C. D. Wright, Clerk to the Council.

FEBRUARY 5.

***Hailsham.**—Alterations and Extensions.—To the Post Office, for H.M.O.W. Contracts Branch, King Charles-street, S.W.1. Dep. £1 1s.

FEBRUARY 6.

***Purley.**—Telephone Exchange.—Erection of, for H.M.O.W. Contracts Branch, King Charles-street, S.W.1. Dep. £1 1s.

***Salisbury.**—New Senior School.—The Clerk of the County Council, The Castle, Winchester. Dep. £1 1s. (payable to the Hampshire C.C.).

FEBRUARY 10.

Cheriton.—Wall.—Reinforced concrete, approx. 200 yds. length of forecourt retaining wall, with approach steps and enclosure walls, fencings, and all appurtenant works, for U.D.C. A. S. Lilley, E. and S. Dep. £1 1s.

London.—Building.—New dust shoots on site adjoining Chancellor's-wharf, for Hammersmith B.C. R. Hampton Clucas, B.E. and S.

FEBRUARY 11.

Essex.—Centre.—Cookery and manual instruction centre at Stanford-le-Hope Council school, for C.C. Jno. Stuart, F.R.I.B.A., County Architect. Dep. £1 1s

Gosforth.—Houses.—16 three-roomed, Coxlodge-rd., for U.D.C. G. Nelson, E. and S.

FEBRUARY 14.

Cardiff.—Garage.—Foundations of bus garage at Sloper-rd., for T.C. Geo. H. Whitaker, City E. Dep. £3 3s.

NO DATE.

Linslade.—House.—At the Council's Water Pumping Station, Soulbury-rd., Linslade, for U.D.C. Harold A. Rolls, L.R.I.B.A., chartered architect, 15, Bridge-st., Leighton Buzzard. Dep. £2 2s.

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MATERIALS, etc.

JANUARY 20.

Devon.—Road Materials.—For C.C. R. M. Stone, C.S. (North-Western Divison), 9a, High-st., Barnstaple.

Havant.—Road Materials.—For U.D.C. C. E. Maynard, S.

West Sussex.—Tar.—1,260,000 gallons of tar, etc., for C.C. H. W. Bowen, C.S.

JANUARY 21.

India.—Mild Steel Bars.—For Indian Stores Department, New Delhi. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 9564.)

Worcestershire.—Stone, etc.—For Highways and Bridges Department. B. C. Hammond, C.S., 3, Foregate-st., Worcester.

JANUARY 22.

Essex.—Road Materials.—For C.C. W. H. Morgan, C.S., Chelmsford.

London.—Highway Materials.—For Chelsea B.C. W. R. Manning, B.S.

JANUARY 23.

Hornsey.—Road Materials.—For T.C. W. H. Adams, B.E. and S.

Liverpool.—Paints, etc.—For T.C. W. Moon, T.C.

Worthing.—Stone and Tar.—For T.C. B.S.

JANUARY 25.

Blackburn.—Road Materials.—For C.B. H. M. Webb, Borough and Water Engineer.

Dublin.—Tar Macadam.—For T.C. G. J. Sherlock, T.C.

London.—Building Materials, etc.—For Paddington B.C. W. F. Abbiss, T.C.

Smethwick.—Highway Materials.—For C.B. R. Fletcher, B.E. and S.

JANUARY 26.

Hertfordshire.—Road Materials.—For C.C. A. E. Prescott, C.S.

JANUARY 27.

Finchley.—Materials.—For U.D.C. Percival T. Harrison, M.Inst.C.E., 9, The Hawthorns, Regent's Park-rd., Finchley, N.3.

JANUARY 28.

Southall-Norwood.—Road Materials.—For U.D.C. J. B. Thomson, E. and S.

Willesden.—Building Materials, etc.—For U.D.C. F. Wilkinson, E. and S.

JANUARY 29.

Bradford.—Road Materials.—For T.C. F. Marsden, City E. and S.

Welwyn Garden City.—Road Materials.—For U.D.C. Capt. W. E. James, S.

Worsley.—Road Materials.—For U.D.C. J. Howard, S.

JANUARY 30.

Tring.—Road Materials.—For U.D.C. H. N. Hedges, S.

JANUARY 31.

Canterbury.—Materials.—For T.C. H. M. Enderby, M.Inst.M. & Cy.E., C.E. and S.

Croydon.—Highway Materials.—For C.B. B.E.

Norfolk.—Road Materials.—For C.C. S. H. Warren, C.S., Norwich.

FEBRUARY 1.

Folkestone.—Cement, etc.—For T.C. A. E. Nichols, B.E.

FEBRUARY 3.

Bridgwater.—Road Materials.—For T.C. R. A. Watson, B.E. and S.

Cairo.—Asphalt.—Egyptian Ministry of Public Works, 6,800 metric tons of asphalt for Tanzim Department, Cairo. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. B.X. 9923.)

Chatham.—Road Materials.—For T.C. R. L. Honey, B.E. and S.

FEBRUARY 4.

Leeds.—Road Materials.—For T.C. E. W. Cockerlyne, Highways Engineer, 155, Kirkstall-rd.

FEBRUARY 6.

Lexden and Winstree.—Road Materials.—For R.D.C. W. H. Filer, S.

FEBRUARY 10.

Tottenham.—Road Materials.—For U.D.C. E. Townson, clerk.

FEBRUARY 11

East Grinstead.—Road Materials.—For U.D.C. E. and S.

FEBRUARY 12.

Middlesex.—Road Materials.—For C.C. A. Dryland, C.B., Middlesex Guildhall, Westminster, S.W.1.

Middlesex.—Bitumen Emulsions.—For C.C. A. Dryland, C.B., Middlesex Guildhall, Westminster, S.W.1.

ENGINEERING, IRON AND STEEL

JANUARY 20.

Edinburgh.—Steelwork.—For conveyor house over existing boiler house at Portobello power station, for T.C. E. J. MacRae, A.R.I.B.A., City Architect.

JANUARY 21.

Dublin.—Railings.—530 linear yds. (approximately) of iron railings at Kehoe-sq., Inchicore, Dublin, for C.B. City Treasurer, Exchange Buildings, Lord Edward-st., Dublin. Fee 2s. 6d.

Wolverhampton.—Building.—Engine house, boiler house, tank, etc., in reinforced concrete, together with wharf, access road and other works at Dimmingsdale, for T.C. B. L. McMillan, Water Engineer and Manager. Dep. £5.

JANUARY 23.

Radnor.—Bridge.—Reconstruction of Little Bridge, Newbridge-on-Wye, in reinforced concrete, and for the widening of the approaches, for C.C. T. W. Wishlade, Assoc.M.Inst.C.E., C.S. and A., Llandrindod Wells. Dep. £2 2s.

JANUARY 24.

Salford.—Sewerage.—Main sewerage works in Great Clowes-st., Broughton, for T.C. City E. Dep. £3 3s.

Scarborough.—Reinforced Concrete.—Construction of a reinforced concrete bridge over Peasholm Glen, for T.C. Harry W. Smith, A.M.I.C.E., B.E., Town Hall. Dep. £5 5s.

JANUARY 27.

Benfleet.—Sewerage.—Sewerage works for construction of about 4 miles of stone ware pipe sewers, with manholes, and works incidental, at Hadleigh, for U.D.C. W. E. Blizard, 9, Victoria-st., Westminster. Dep. £3 3s.

Edinburgh.—Filters.—Two filter beds at Fairmile head, for T.C. J. & A. Leslie & Reid, C.E., 29, Waterloo-pl. Dep. £5.

Hazel Grove and Bramhall.—Sewage.—500 yds. of 24-in. stoneware outfall sewer, about 210 yds. in tunnel, with manholes and storm overflow; also detritus and screen chambers, storm water and settling tanks, percolating filters, humus tanks, effluent outfall, sludge drying beds with carriers and pipe connections, approach-rd., fencing and manager's house, with water supply therefor, at Offerton, for U.D.C. G. B. Kershaw, chartered civil engineer, 9, Victoria-st., Westminster, S.W.1. Dep. £5.

JANUARY 28.

Barton-upon-Irwell.—Reconstruction.—Of Rake-lane bridge, Clifton, for R.D.C. C. Faulkner, Clerk, Green-lane, Patricroft. Dep. £2.

JANUARY 29.

Edinburgh.—Widening.—Milton-rd. bridge, for T.C. B.E.

JANUARY 31.

Johannesburg.—Bridgework.—Structural bridgework, for South African Railways and Harbours. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 8688.)

Johannesburg.—Steelwork.—Structural steelwork, etc., for points and crossings shop, for South African Railways and Harbours. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 8687.)

Stratford-upon-Avon.—Bridge.—Bridge, partly in reinforced concrete and partly in brickwork, over River Avon, for T.C. F. W. Jones, B.S. Dep. £3 3s.

FEBRUARY 5.

Lancashire.—Reconstruction.—Also widening of Lollies Canal bridge on Scarisbrick-Downholland and Maghull-rd., for C.C. County Surveyor and Bridgemaster, County Offices, Preston.

FEBRUARY 20.

Bann.—Drainage.—Extensive deepening and widening, through rock and other materials, of Lower Bann River over its whole course of approximately 30 miles between Lough Neagh and tidal portion of river near Coleraine, Co. Londonderry; and for concrete construction works in connection with installation of three sets of flood gates, together with auxiliary works for navigation and fisheries, for Government of Northern Ireland. Secretary, Ministry of Finance, 15, Donegall-sq. West, Belfast. Dep. £50.

FEBRUARY 27.

Johannesburg.—Structural Steelwork.—For South African Railways and Harbours. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 8972.)

MARCH 1.

Cairo.—Bridge.—Over River Nile at Kasr-el-Nil, for Main Roads and Bridges Department. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 8704.)

MARCH 3.

Australia.—Pipes.—Pipes, valves and receivers, with accessories for high-pressure services at Yallourn Power Station extensions, for State Electricity Commission. Agent-General for Victoria, Victoria House, The Strand, London. Charge £2 2s.

Watford.—Sewerage.—Construction of tanks and percolating filters at the Sewage Disposal Works, and alterations to a pumping station at Abbots Langley, for R.D.C. A. P. I. Cotterell & Son, engineers, 54, Victoria-st., Westminster, or E. H. L. Lailey, S., 9, Market-st., Watford. Dep. £5 5s.

Zagazig, Egypt.—Bridge.—Swing bridge over Canal El Wadi, for the Ministry of Communications, Main Roads and Bridges Department. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Reference No. A.X. 8978.)

MARCH 4.

Wellington, N.Z.—Structural Steel.—Structural steel, galvanised screens and ladder rungs, for Public Works Department, New Zealand. Department of Overseas Trade, 35, Old Queen-st., London, S.W.1. (Ref. A.X. 8785.)

ROAD, SEWERAGE, AND WATER WORKS

JANUARY 20.

Chirk.—Road.—Proposed works of improvement at Chirk Bank, on London-Holyhead main road, A.5, near Chirk, for Denbighshire C.C. E. A. Evans, C.S., 46, Clwyd-st., Ruthin. Dep. £5.

Edmonton.—Making-up.—Chichester-rd., Galliard-rd., Wellington-rd. and Solna-rd., for U.D.C. Cuthbert Brown, E. and S. Dep. £2 2s.

Manchester.—Paving.—Sewering, draining, paving, flagging Cundiff-rd., Chorlton-cum-Hardy, also sewering, draining, paving (concrete), etc., passage behind 293/315, Abbey Hey-lane, 33/43, and bakery, Harrop-st., Gorton, for T.C. F. E. Warbreck Howell, T.C. Dep. £1 1s.

Mitcham.—Making-up.—Of Hassocks-rd. and Windermere-rd., for U.D.C. S.

Otley.—Roads.—Construction of water mains, sewers, drains, and roads in connection with the development of the Westbourne housing estate, for U.D.C. C. F. Hodgson, Council Offices, Otley. Dep. £1 1s.

Plymouth.—Making-up.—Of (1) Alfred-place, Ford; (2) Percy-ter., St. Budeaux; (3) Maida Vale-ter., section 2; (4) Salisbury-ter.-lane, for C.B. J. Wibberley, City Engineer, Surveyor and Architect. Dep. £2 2s. each.

Rochester.—Making-up.—Sewering, levelling, paving, metalling, flagging, channelling making good and lighting part of Cornwall-rd., for T.C. W. Law, City S. Dep. £1 1s.

JANUARY 21.

Newport.—Widening.—Also reconstruction of Chepstow-rd. (part) from Hawthorne-av. to borough boundary, for C.B. B.E. Dep. £2 2s.

Salford.—Making-up.—3 passages with stone setts, and laying 35 yds. of 12-in. pipe sewer, for T.C. City E.

JANUARY 22.

Andover.—Roads.—Reconstruction and improvement works on 9 miles of district highways, for R.D.C. C. E. Marchant, E. and S., 4, Windsor-rd., Andover. Dep. £3 3s.

Dunbar.—Roads.—Construction of three new roads and other relative works, for T.C. D. W. Murdoch, B.S. Dep. £3 3s.

Hendon.—Roads and Sewers.—Laying 675 yds. lin. of 12 in. and 9 in. soil sewer, 570 yds. lin. of 12 in. and 9 in. surface water drain, and the construction of 620 yds. lin. of new roads and footpaths, at their Berridge Estate Housing Site, Little Stanmore, for R.D.C. H. W. Rackham, S., Council Offices, Harrow Weald, Stanmore. Dep. £3 3s.

Kirkcaldy.—Streets.—Street and sewerage works at Thornton site, for D.C. W. Williamson, F.R.I.B.A., architect. Dep. £1 1s.

Waterloo-with-Seaforth.—Roads.—Reconstruction of a portion of Seaforth-rd., Seaforth, for U.D.C. J. R. Fothergill, A.M.I.C.E., E. and S., Town Hall, Waterloo, near Liverpool. Dep. £1 1s.

JANUARY 23.

South Shields.—Making-up.—Aston-st., Crondall-st., Dulverton-av., Dulverton-av. East, Kent-st., Kent-st. East, Lismore-av., Newbury-st., Reading-rd., Wantage-st., Wantage-st. East, back Alverthorpe-Crondall-st., back Birchington-av., back Dulverton-av. East, back Lismore-av., back Stanhope-rd., Tynedale-rd., for C.B. J. Paton Watson, B.E. Dep. £2 2s.

JANUARY 24.

Blackburn.—Making-up.—Various streets, for C.B. M. M. Webb, B.Sc.(Eng.), London, and Assoc.M.Inst.C.E., B. and W.E., Town Hall.

Essex.—Reconstruction.—Of approximately 1½ miles of London-Yarmouth road, in parishes of Mountnessing, Ingatestone and Margaretting, for C.C. W. H. Morgan, C.S. Dep. £5 5s.

CHAIRS,
STRONG & INEXPENSIVE,

ALSO
WOODWORK
FOR ALL PUBLIC BUILDINGS.
GEO. M. HAMMER & CO. LD.
CROWN WORKS, ST. JAMES'S ROAD,
BERMONDSEY, LONDON, S.E.16.
TELEPHONE BERMONDSEY 1284.

Hartley Wintney.—Waterworks.—Providing and laying about one mile of 4 in. cast-iron main from the pumping station at Warren Heath, for R.D.C. L. G. Goddard, S., Council Offices, Hartley Wintney, Hants; or of engineers, A. P. I. Cotterell & Son, 54, Victoria-st., Westminster. Dep. £3 3s.

JANUARY 25.

Edinburgh.—Sewer.—New brick and concrete sewer of 6 ft. diameter in tunnel, length approximately 1,150 yds. on section D.E., South Crewe-rd., for T.C. B.E.

Edinburgh.—Sewer.—On section C.D. of North Crewe-rd., for T.C. B.E.

JANUARY 27.

Beddington and Wallington.—Improvements.—To Salcott-rd., Morton-gardens, The Manor-way, for U.D.C. S. F. R. Carter, S. Dep. £1 1s. each.

Cumberland.—Tarring.—Surface tarring of part or whole of approx. 500,000 sq. yds. of main roads with refined tar, for C.C. G. O. Lockwood, C.S.

Maldens and Coombe.—Sewers.—Laying Green-lane soil sewer, for U.D.C. H. Jeffes, A.M.I.C.E., E. and S., Council Offices, New Malden, Surrey. Dep. £2 2s.

JANUARY 28.

Merioneth.—Road Works.—On Bryncastell and Cildydd road diversions, route A.487 (Dolgelley-Machynlleth-rd.), for C.C. H. E. Davies, C.S., County Offices, Dolgelley, Merioneth. Dep. £5.

FEBRUARY 3.

Southampton.—Making-up.—Cherry-walk; Mulberry-walk; Torquay-av.; Bramston-rd.; and Cedar-av., for C.B. B.E., 33, French-st. Dep. 10s. 6d. each.

FEBRUARY 5.

Leicestershire.—Road.—Construction of a by-pass road on the Leicester-Market Harborough main road, in the Urban District of Oadby, for C.C. S., Grey Friars, Leicester. Dep. £2 2s.

FEBRUARY 18.

Londonderry.—Pipes.—Provision and laying of a double line of 12-in. steel pipes, with cast steel ball and socket joints, in trench under bed of River Foyle, for T.C. W. Criswell, engineer, Guildhall. Dep. £5 5s.

Public Appointments

JANUARY 20.

Birmingham.—Engineer required by E.C. Chief Education Officer, Education Offices, Margaret-st.

JANUARY 22.

Durham — (*a*) Architectural Assistant, (*b*) Junior Architectural Assistant, required by the County Council. The Director of Education, Shire Hall, Durham.

JANUARY 24.

***Eastbourne.**—Architectural Assistant required by the B.C. Borough Engineer, Town Hall.

Reading.—Architectural Assistant required by the C.B. Town Clerk, Town Hall.

JANUARY 25.

Bradford.—(*a*) Assistant Quantity Surveyor; (*b*) Clerk of Works; required in City Architect's Department. Town Clerk, Town Hall.

***Derby.**—(*a*) Senior Architectural Assistant; (*b*) Two Architectural Assistants; (*c*) Assistant Quantity Surveyor; required in B.A. Department. Borough Architect, Municipal Offices, Babington-lane.

India.—Executive Architect required by Government of Punjab. Secretary, High Commissioner for India, General Department, 42, Grosvenor-gardens, S.W.1.

JANUARY 27.

***Grimsby.**—Clerk of Works required by the Education Committee. Secretary, Education Offices.

***London.**—Temporary Architectural Assistant, Town Clerk, Finsbury Town Hall, Rosebery-avenue, E.C.1.

***Sheffield.**—(*a*) General Assistant; (*b*) Education Assistant; required in the City Architect's Department. City Architect, Town Hall.

JANUARY 28.

***Twickenham.**—Architectural Assistant required by the Corporation. Borough Engineer and Surveyor, Municipal Offices.

JANUARY 30.

***Leicester.**—Architectural Assistant required by the Corporation. City Engineer and Surveyor, Town Hall.

***Leicester.**—Clerk of Works required by the Corporation. City Engineer and Surveyor, Town Hall.

London.—Principal required at the Central School of Arts and Crafts, Southampton-row, W.C.1, by the L.C.C. Education Officer (T.1), The County Hall, Westminster-bridge, S.E.1 (stamped addressed foolscap envelope necessary).

***Norwich.**—Estates Surveyor required in C.E. Office. City Engineer, Guildhall.

***Nottingham.**—Housing Architect required by the City Council. Town Clerk, Guildhall, Nottingham.

FEBRUARY 3.

***Newmarket.**—Junior Assistant required by the U.D.C. Clerk to the Council, Deva Chambers, Newmarket.

FEBRUARY 7.

***Gloucester.**—Engineer (Temporary). R. T. Gardiom, Clerk of the County Council, Shire Hall, Gloucester.

MARCH 6.

London.—Assistant Examiners: (Forthcoming Examination) in the Patent Office (20-25, with extension in certain cases). The Secretary, Civil Service Commission, Burlington-gardens, London, W.1.

PROPOSED NEW BUILDINGS & OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education, M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

Aughton.—West Lancashire R.D. proposes diphtheria block to Isolation Hospital at Aughton, near Ormskirk. Plans prepared by R. Rowbotham, Derby-st., Ormskirk.

Belfast.—Office premises on site in Howard-st. G. W. C. Poole, architect, 1, Howard-st.

Birmingham.—Tenders invited for chapel at Solihull cemetery for Solihull R.D.C. Plans by Harvey & Wicks, F. & A.R.I.B.A., architects, Bennitts-hill, Birmingham.

Blackburn.—B.C. propose erecting school at Shorrocks-lane and open-air school at Craven Brow.

Blackburn.—T.C. approved: 4 houses, Whalley Old-rd., J. Aspin; 6 houses, Livingstone-rd., E. J. Moulding.—Estimate of £18,087 for school at Intack approved, and decided to apply to M.H. for borrowing power.

Blackpool.—Parks Committee propose social centre at Stanley-park. B.S. is to submit rough sketch.

Bolton.—E.C. acquired site, Chorley Old-rd., Duffcocker, for electricity sub-station.

Bristol.—T.C. preparing contracts for 250 houses, and tenders to be in by February 15. Tenders also for 150 houses for Redcatch-lane site at end of February.

Burnley.—B.E. preparing plans for boat-house and cafe, children's paddling pool and bridge across lake at Bank Hall, Burnley, for Corporation. Cost £3,000.

Camberley.—Plans for new premises been adopted by Camberley Working Men's Club and Institute.

Carlisle.—City Council approved schemes for city road improvements involving £60,000. Most important proposal is to widen Warwick-rd., from Botcherby to golf course, at £28,000. This scheme includes bridge over River Petteril.

Carlow.—County Board of Health to borrow £6,000 to build 20 labourers' cottages.—Carlow District Mental Hospital Joint Committee applied for sanction to loan of £6,000 for providing additional accommodation Kelvin-grove.

Castle Ward.—U.D.C. decided to erect 60 houses in Dinnington and Dinnington Colliery areas.

Chesterfield.—J. Haworth, of Sheffield, consulting engineer in connection with proposed extensions and alterations at sewage works by T.C.

Chesterfield.—T.C. propose club-room and stores for Council's employees

Chorley.—T.C. propose convenience adjacent to ing-fields and to provide children's paddling pool, Astley-park.

Cookstown.—R.D.C. to seek loan £5,000 on construction two bridges at Ardtrea (£3,500) and Tullagh (£1,500).

Coventry.—Tenders be invited in connection with Wesleyan central hall. Cost about £36,000. Plans by C. Redgrave, L.R.I.B.A., architect, 33a, Earl-st.

Darlington.—Corporation propose weir on river Tees, just below waterworks, at £4,200, and widen road at Park gates on each side of railway bridge, at £59,000.

Dewsbury.—J. Smith & Sons (Cleaners), Ltd., The Dye Works, proposing extensions to dye house. Plans by T. W. Sharp, L.R.I.B.A., Huddersfield-rd.

Down.—£10,000 is to be spent in carrying out improvements, County Mental Hospital.

Droitwich.—T.C proposing 40 houses.

Dublin. — Plans approved by City Architect: Baltin-rd., 12 shop dwellings, L. Kinlen; Grand Central Cinema, alterations, Irish Kinematograph Co.; Ormond-rd., 5 houses, J. Daly; Beresford-place, alterations, Liberty Hall; St. Patrick's Monastery, Marino, addition to Kitchen wing, Christian Brothers; 102-103, Grafton-st., and 4-5, Wicklow-st., alterations, G. A. Brittain, Ltd.; O'Donovan-rd., Fairbrothers' Fields, schools, Rev. Brother Stapleton; 9-10, Lemon-st., warehouse, etc., Cavendish Furniture Co.; 96, Lower Mount-st., alterations, Sir Patrick Dun's Hospital; Home Farm-rd., schools, Canon Dudley; 64, Grafton-st., extension, F. W. Woolworth & Co.

Dudley.—Estimated cost of carrying out the three-year educational programme been estimated by E.C. at £123,650. Estimated cost of proposed new technical college for Staffordshire and Dudley is £136,800.

East Suffolk.—C.C. recommended scheme for five-year programme of work on classified roads and bridges, at £301,500.

Exeter.—City Council approved revised scheme for by-pass road through city to relieve traffic congestion.

Fellings.—E.C. proposing to develop and reorganise several schools in district and erect senior or modern school at High Felling.

Folkestone.—T.C. passed: 6 houses in proposed Sands-rd., for S. J. Clark.

Gillingham.—Plans passed by T.C.: F. B. Hooper, for C. J. Howard, 15 houses, Eastern-rd., and two in Grange-rd.

Gomersal.—Yorkshire Electric Power Co., Ltd., transformer chamber at mill of T. Burnley & Sons, Ltd. Tenders to be invited.

Gosforth.—U.D.C. secured sanction from M.H. to erect 16 houses, Coxlodge site.

Hailsham.—R.D.C. considering scheme for 20 further houses at Hellingley.

Heywood.—Lancashire County Police authorities desire to build police court and police station on land in Hindhill-st. Plans approved.

Irlam.—P.C. of Parish Church propose improvements to church, providing choir stalls, building two arches in chancel wall and erect vestry, at £1,400.

Jarrow.—Managers, Roman Catholic school, are proposing alterations to buildings and erection new central school for 200 boys.

Lancaster.—Housing Committee had plans prepared for additional 100 houses.

Leeds.—Factory and canteen to accommodate 10,000 persons adjoining existing factory at Hudson-rd. mills, for Montagu Burton, Ltd. Architect, H. Wilson, Roundhay.

Leyton.—M.H. held inquiry into T.C.'s petition for compulsory powers to obtain land at Bromley-rd., near "Baker's Arms," for baths and wash-houses.

Lincoln.—Plans been submitted to B.E. by T.C. for junior school at St. Giles.

Liverpool.—H. E. Davies & Son, F. & A.R.I.B.A., Wellington-buildings, The Strand, architects for improvements "Grapes" hotel, Thornton, for Crown Brewery Co., Ltd.

London (Hackney).—B.C. approved: J. Orchard, one-story workshop, rear 268, Richmond-rd.; A. E. Knowlson, 3 houses, Portland-av.; C. A. Brown, sports pavilion at rear of 133 to 139, Holmleigh-rd.

London (Lewisham).—B.C. approved: Wm. Wilmot, Ltd., 18 houses, Bochey-rd.; L. & W. Whitehead, reconstruct and redrain and build and drain additions to "Rutland Hotel," Perry-hill; F. N. Sutton & F. C. Bensted, 12 houses, Ravensbourne-park; J. H. Bolton, 11 houses, Algernon-rd.; G. Tryhorn, 4 houses, Bournville-rd.

London (Woolwich).—B.C. approved: G. T. Scudamore, Green-lane, Eltham, 14 houses, Cambridge Green, Eltham; W. E. Wright, 66, Eltham-hill, Eltham, 12 houses, Eltham-hill, Eltham.

Lowestoft.—A new ward, at £6,833, is proposed at Joint Smallpox Hospital by T.C. Plans (in which other councils share responsibility) are on hand for protection of foreshore at Pakefield, to the £8,600 plans of B.S. Plans have been passed for 10 houses at Kimberley-rd., for J. Gaze.

Lurgan.—Chief medical inspector Ministry of Home Affairs, held inquiry into application of B.G. for loan of £40,000, to convert Lurgan Hospital into up-to-date district hospital.

Manchester.—Health Committee acquired site junction of Moston-lane and Nuthurst-rd. for lavatory conveniences. Plans by H. Price, A.R.I.B.A., Town Hall.—T.C. propose central Police Headquarters in Jackson's-row. City architect, H. Price, A.R.I.B.A.—Sanction received to borrowing of £50,930 in connection with schools at Newton Heath, Chorlton-cum-Hardy, and Ducie-av. central school for E.C.

Manchester.—Application is to be made to borrow £37,500 for elementary school at Mauldeth-rd., Withington.—Application is to be made to borrow £5,300 for provision hotel facilities at Manchester Aerodrome. Plans by City Architect.—Provision be made for stores, etc., at repair depot for Public Health Committee.—Libraries Committee propose additional room at Cheetham branch library.—E.C. propose reconstructing premises, Birley-st. Council school and provide additional classroom accommodation at Mansfield-st. Council school.—Plans prepared for tramway office at Hollingwood terminus.—Tramway shelters at junction of Cheetham Hill-rd. and Queen's-rd. and at Blackley.

Mexborough.—Scheme being considered for conversion Oxford Picture-palace in Market-st. into baths for U.D.C.

Middleton.—E.C. prepared schemes in connection with school building programme; new schools are to be erected in Rhodes area, Dunford-st. area, Elm-st. area, and Halkrington area, at £80,000. Plans by B.E.

Milnrow.—Lancashire C.C. proposes central school to accommodate 400 scholars. Plans by County Architect, 16, Ribbleedale-place, Preston.

Newcastle.—Housing Committee agreed to offer to Free Churches site fronting Newton-rd., on Heaton housing estate, specially reserved for church.

Newcastle-upon-Tyne. — Messrs. Woolworth's, Northumberland-st., Newcastle, are, it is understood, to embark on extension scheme.

Newmarket.—R.D.C. decided to purchase housing site at Cheveley, and to obtain tenders for three pairs of houses; also to erect on site at Soham eight pairs of cottages and six pairs of bungalows.

Northampton.—Two schools at Weston Favell by Northants E.C., at £27,000. John Brown, A.R.I.B.A., architect, 33, St. Giles-st.

Nuneaton.—Corporation propose clinic and child welfare centre overlooking Riversley-park. B. C. Moon, B.S.

Peterborough.—City Council approved plans by City E. for 100 houses. Tenders invited.

Plymouth.—The Water Committee adopted scheme for water mains to improve supply in Cattedown district and elsewhere, at £64,000.

Plympton St. Mary.—R.D.C.'s sewerage and sewage disposal schemes affect Plympton St. Mary, Plympton St. Maurice, Billacombe and Pomphlett, Brixton, Roborough, Yealmpton, Cornwood, and Newton Ferrers, and approximate total cost is £59,000.

Poole.—T.C. approved: alterations and additions, "The Britannia Hotel," Britannia-rd., P. J. Newby Vincent, for Strong & Co., of Romsey, Ltd.; National Provincial Bank, 213, High-st., F. C. R. Palmer, for National Provincial Bank, Ltd.; 4 shops and houses, corner Wimborne-rd. and Lester-rd., Burt & Vick.

Retford.—T.C. propose reconstruction existing schools and erection of new schools.—B.S., R. E. Wilson.

Retford.—T.C. approved: Martlew & Bell, 4 houses, Newton-st.

Rickmansworth.—U.D.C. decided to purchase, for use as offices, Basing House.

Rochdale.—T.C. propose additions shelter, Broadfield-park.—Scheme for fire station and firemen's cottages in Maclure-rd. under consideration. Plans by B.S

Saltash.—Effort on foot to raise £1,000 for restoration parish church of St. Nicholas and St. Faith

Shelmanthorpe. — Architect attended U.D.C. meeting with plans for proposed Council houses, and was instructed to get out specifications and quantities.

Smethwick. — Alterations and improvements, Labour Social Club, Unity House, Coopers-lane. Plans by G. Randle, architect, Lloyd's Bank-buildings, 116, High-st.

Southall.—Westminster Bank, Ltd., acquired site in High-st. for branch banking premises. Hall-Jones & Dewhirst, F. & A.R.I.B.A., architects, Parliament-mansions, Orchard-st., Westminster, S.W.

Southend.—Tenders shortly be invited for rebuilding "London Hotel," High-st. Plans by architectural staff of brewers, Whitbread & Co., Ltd., Chiswell-st., London, E.C.

Stoke-on-Trent.—Wood & Goldstraw, A.R.I.B.A., Town Hall, Tunstall, architects, additions Orthopædic Hospital, Longfield, for Board of N. Staffordshire Crippies' Society. Cost £18,000.

Stretford.—U.D.C. passed: 12 houses in Wordsworth-Ruskin-roads for Smith & Alcock, Ltd., 130 in Barton and Melville-roads., for J. W. Maunders, alterations at Lyceum Theatre, for W. Stansfield.

Sunbury.—Surveyor been instructed by U.D.C. to prepare plans for conveniences at Rivermead Island.

Sunderland.—Health Committee considering public abbatoir.—Housing Committee recommends 200 three-roomed houses and 100 four-roomed houses, Hylton-rd.

Swansea.—E.C. propose new dormitory dining-rooms and classrooms at Fairwood to plans by Borough Architect. C.B. propose public convenience at Limeslade. Borough Engineer and Surveyor is to make lay-out of Cadle housing site at Florestfach.

Tenterden.—T.C. received M.H. sanction borrowing £166 for purchase of land, and £8,281 for 26 houses.

Tottington.—Plans approved for new practical instruction centre at Tottington for Lancashire C.C. Plans by County Architect.

Tullamore.—New reinforced concrete bridge in course of construction at Kilbeggan Bridge.

Tyrone.—C.C. borrowing £2,500 for school at Leardin.

Watford.—R.D.C. to make application to M.H. for sanction to borrowing £460, in connection with purchase of land at Bedmond, Abbot's Langley, for housing purposes.

West Hartlepool.—T.C. instructed B.E. to prepare plans and estimates for 50 houses.

West Riding.—Higher Education Committee propose: £30,920, buildings, for Pontefract King's School; technical institute at Barnoldswick, at £21,500; £680, caretaker's house, at Chelmsford Mining and Technical Institute, Dinnington; new mining institute at Mexborough. Elementary Education Committee propose heating apparatus at Acomb Council School, at £980; new infants' department for 120 children at Baildon Sandall Council School, at £3,800; additional office and lavatory accommodation at Castleford, Welbeck-st., school, at £1,052; new £1,250 offices at Goole, Alexandra-st., School; new school at Great and Little Preston, for 730 scholars (*vice* also scheme for 480); infants' school at Hoyland, at £7,500. The Education Committee propose, in all, to expend £370,000 for each of the next three years on educational building.

West Riding.—Highways' Committee proposes surveyor's area offices at Skipton, Harrogate and Doncaster, at estimated cost of £7,800. The committee also proposed reconstruction, at £15,970, of Apperley Bridge.

West Riding.—Housing Committee propose a sanatorium for women and children at Scriven.

Weston-super-Mare.—Mr. A. J. Toomer, County Architect to the Somerset C.C., has prepared the plans for the new police station which is to be erected on the Whitecross Nurseries site, and not Mr. E. Stead, County Surveyor.

York.—Preliminary plans public hall, prepared by City E.—Electricity Committee approved scheme by City Electrical Engineer for changing portion city from direct to alternating current. Committee recommended Council to adopt scheme, and to apply to Electricity Commissioners to borrow £36,395.

York.—E.C. obtained sanction borrow £12,000 for elementary school at Tang Hall.

*See also our List of Contracts, Competitions, etc.

PRICES CURRENT OF MATERIALS.*

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Best Stocks	4 3 6
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Flettons, at King's Cross	2 12 3	Best Blue Pressed Staffs	9 5 0
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Best Stourbridge Fire Brick :—
2½ in. ..... 8 11 0 3 in. 10 3 0

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Best White Ivory, and Salt Glazed Stretchers	21 0 0	D'ble Str'tch'rs	29 10 0
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Headers	20 10 0	One Side and two Ends	30 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	Two Sides and one End	31 10 0
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Delivered London

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2 in. per yd. super.	1 11	3 in per yd. super.	2 9
2½ in. " "	2 4	4 in. " "	3 6

	s. d.		
Thames Ballast	9 9	per yd.	delivered 2 miles radius Paddington.
Fit Sand	12 0	" "	
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Best Portland Cement. British.
Standard Specification. Test £2 6 0 to £2 8 0 30s. alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 7 6
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Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	5 12 0
Sirapite, Coarse	3 0 0
" Finish	3 17 0
Grey Stone Lime	2 10 0
Chalk Lime	2 10 0
Best Ground Blue Lias Lime	1 17 6
Hair per cwt.	2 2 6
Granite Chippings	1 12 0

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Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

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BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. per ft. cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE.—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube 4 4½
Do. do. delivered on road wagons at above stations, per ft. cube 4 5½
White basebed, 3d. per ft. cube extra.
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE.—
F.O.R. Quarries, Wirksworth, Derbyshire. s. d.
Random blocks from 10 ft. and over P. ft. cb. 14 0
Sawn two sides " " 22 6
Sawn three or four sides " " 27 6

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station, London.
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... Per ft. super 5 6
6 in. rubbed two sides, ditto ..... " 6 0
3 in. sawn two sides slabs (random sizes) " 2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) ..... " 1 6½
1½ in. to 2 in. ditto, ditto ..... " 1 3½

HARD YORK—
Delivered at any Goods Station, London.
Snapped random blocks ..... Per ft. cube 6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super 5 1½
6 in. rubbed two sides, ditto ..... " 6 1½
4 in. sawn two sides slabs (random sizes) " 2 1½
3 in. ditto ditto " 2 10
2 in. self-faced random flags ..... Per yd. super 8 6

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 6d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
6 × 11	£30 0	3 × 6	£21 0
5 × 9	28 0	3 × 11	25 0
4 × 8	25 0	2 × 11	23 0
4 × 7	23 0	3 × 9	24 0
3 × 8	22 0	2½ × 9	24 0
3 × 7	22 0	3 × 4½	21 0
2½ × 7	21 0	3 × 4	21 0

PLANED BOARDS.

1 × 11 ..... £30 0 | 1 × 9 ..... £28 0

PLAIN EDGE FLOORING

Inches.	per sq.	Inches.	per sq.
⅝	18/-	1¼	30/-
¾	21/-	1½	34/-
1	24/-		

TONGUED AND GROOVED FLOORING

Inches.	per sq.	Inches.	per sq.
1	24/-	⅝	16/6
1¼	30/-	¾	19/-
1½	34/-	1	24/-

MATCHING (BEST).

Ins.	BATTENS.	s. d.	SAWN LATHS.	s. d.
¾ × 2	per 100 ft.	2 6	Per bundle	2 6

1" AND UP THICK.

	£ s. d.	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 16 0	to 0 18 0
Dry American and/or Japanese Figured Oak, ft. cube	0 14 0	to 0 15 0
Dry American and/or Japanese Plain Oak, ft. cube	0 10 0	to 0 13 0
Dry sq. edged Honduras Mahogany, ft. cube	0 15 0	to 0 18 0
Dry Log cut Honduras Mahogany, ft. cube	0 16 0	to 1 1 0
Dry Cuba Mahogany, ft. cube	1 1 0	to 1 10 0
Dry Teak, ft. cube	0 13 0	to 0 15 0
Dry American Whitewood, ft. cube	0 10 0	to 0 14 0
Best Scotch Glue, per cwt.	4 10 0	to —
Liquid Glue, per cwt.	4 7 0	to 5 10 0

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000.

	£ s. d.		£ s. d.
24 by 12	32 18 4	18 by 10	18 12 11
22 by 12	29 17 11	18 by 9	16 9 2
22 by 11	27 14 2	16 by 10	15 12 6
20 by 12	26 5 0	16 by 8	12 3 9
20 by 10	22 10 0		

TILES.

Delivered at London rate stations in full truckloads of not less than 6 tons. Per 1,000. f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£5 7 6
ditto hand-made ditto	5 17 6
Ornamental ditto	6 2 6
Hip and valley tiles (per dozen) { Hand-made	0 9 6
{ Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted	£12 10 0
Plain Compound Girders	14 10 0
Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.—To London Station, per ton

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	12 0 0	⅝ in. to ¾ in.	10 15 0
⅝ in.	11 0 0	⅞ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Tubes. Wrought Mild Steel.	Tubes. Genuine Staffs. Iron.	Fittings. ½ in. and under.	Fittings. Over ½ in.	Flanges. ½ in. and under.	Flanges. Over ½ in.
	%	%	%	%	%	%
Gas	65	52½	45	47½	55	57½
Water	61½	48½	40	42½	50	52½
Steam	57½	45	35	37½	45	47½
Galv. gas	52½	40	35	37½	45	47½
Galv. water	47½	35	30	32½	40	42½
Galv. steam	42½	30	25	27½	35	37½

*C.I.—HALF-ROUND GUTTERS—London Prices ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	10d.	7½d.	2½d.
3½ in.	10½d.	8½d.	2½d.
4 in.	10½d.	9½d.	2½d.
4½ in.	11½d.	10½d.	2½d.
5 in.	1/1½	11½d.	3½d.

*O.G. GUTTERS.

3 in.	1/0	10½d.	2½d.
3½ in.	1/0½	10½d.	2½d.
4 in.	1/1½	10½d.	2½d.
4½ in.	1/2½	1/0½	2½d.
5 in.	1/5	1/2½	3½d.

*RAIN-WATER PIPES, &c.

Per yd. in 6 ft.	Pipe.	Bends, stock Branches, angles, stock angles.
2 in. plain	1/2½	9½d. 1/2
2½ in. "	1/3	10½d. 1/4½
3 in. "	1/6½	1/1½ 1/8½
3½ in. "	1/11	1/4½ 1/11½
4 in. "	2/2½	1/7½ 2/4½

*The above R.W. Goods prices are subject to an advance of 5% from October 29th, 1929.

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Bends, stock Branches, Pipe, angles.		stock angles.	
	s. d.	s. d.	s. d.	
2 in. per yd. in 6 fts. plain	2 5	1 9	2 1	
2½ in. "	2 9½	1 10½	2 7	
3 in. "	3 0	2 1	3 1	
3½ in. "	3 3	2 7	3 7	
4 in. "	3 8	2 11	4 1½	

L.C.C. COATED DRAIN PIPES—London Prices ex Works

	Bends, stock Branches, Pipe, angles, stock angles.			
	s. d.		s. d.	s. d.
3 in. per yd. in 9ft. lengths	3 6		4 6	7 0
4 in. " "	4 8		5 5	9 3
5 in. " "	6 3		9 6	15 0
6 in. " "	7 3	11	6	19 0

Gasket for jointing, 41/- per cwt.

IRON—	Per ton in London. £ s. d.		£ s. d.
Common bars	11 0 0	to	12 0 0
Staffordshire Crown Bars—Good merchant quality	11 10 0	to	12 10 0
Staffordshire Marked Bars	14 0 0	...	15 0 0
Mild Steel Bars	10 0 0	...	11 0 0
Steel Bars, Ferro-Concrete quality, basis price	10 0 0	...	11 0 0
Hoop iron, basis price	11 10 0	...	12 10 0
" Galvanised	27 0 0	...	28 0 0
Soft Steel Sheets, Black—Ordinary sizes, to 20 g.	13 0 0	...	14 0 0
" " " 24 g.	14 0 0	...	15 0 0
" " " 26 g.	16 0 0	...	17 0 0
Sheets Flat Best Soft Steel, C.R. and C.A quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 0 0	...	16 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	16 0 0	...	17 0 0
Ordinary sizes, 6 ft. by to 3 ft. to 26 g.	18 0 0	...	20 0 0

No. 1 quality £4 per ton extra.

Flat and Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	16 10 0	...	17 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	17 0 0	...	18 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	20 0 0	...	21 0 0
Sheets Galvanised Flat, Best quality—Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	21 0 0	...	22 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	23 0 0	...	25 0 0
Best Soft Steel Sheets, 26 g.	24 10 0	...	25 10 0
Cut Nails, 3 in. to 6 in.	16 10 0		

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	30 5 0
Pipe in coils	30 15 0
Soil pipe	33 15 0
Compo pipe	34 15 0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 5s. cwt. extra.

Old lead, ex London area, at Mills per ton	29 0 0

COPPER.

	s. d.
Seamless Copper tubes (basis) per lb.	1 3
Strong sheet "	1 0
Thin "	1 1
Copper nails "	1 1½
Copper wire "	2 0

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/3	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

½ in.	¾ in.	1 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.	

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

1¼ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/- "

TIN.—English Ingots, 2/3 per lb. SOLDER.—Plumber's 1/-. Tinmen's 1/2. Blowpipe 1/3 per lb.

PAINTS, &c.

Raw Linseed Oil, in pipes	per gallon	0 4 2	
" " "	in barrels	"	0 4 4
" " "	in drums	"	0 4 6
Boiled " "	in barrels	"	0 4 6
" " "	in drums	"	0 4 9
Turpentine in barrels		"	0 4 0
"	in drums (10 gals)	"	0 4 2
Genuine Ground English White Lead, per ton			54 0 0

(In not less than 5-cwt. casks.)
Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*

PAINTS, &c. (*contd.*)

Genuine White Lead Paint, "Father Thames," "Rose Elms," "Park," "Superman," "St. Paul's," "Hampstead," "Palmers," "J." Brand, and other best brands (in 14-lb. tins) not less than 5 cwt. lots ... £ s. d.
per ton delivered 73 10 0
Red Lead, Dry (package extra) per ton 40 0 0
Best Linseed Oil Putty ..... per cwt. 0 15 6
Fitted 0 15 6
Gun. XD quality ..... fkn. 0 3 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft.
15 oz. fourths —	3½d.	32 oz. fourths	6½d.
16 ,, thirds —	3½d.	32 ,, thirds	9d.
21 ,, fourths —	3½d.	Obscured Sheet, 15 oz.	3½d.
21 ,, thirds —	4½d.	,, ,, 21 oz.	4½d.
26 ,, fourths —	4½d.	Fluted, 15oz. 6½d., 21oz.	6d.
26 ,, thirds —	6½d.	Rn'lled,15oz. 4½d.,21oz.	6d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
¼ Rolled plate	4½d.
⅜ Rough rolled	5½d.
½ Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic Silpolyte, and small and large Flemish White...	5½d.
Ditto, tinted	8½d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinned do.	6½d.

Cast plate is same price as rough rolled.

VARNISHES, &c.

		Per Gallon £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Copal Carriage	ditto	1 4 0
Best ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 6
Fine Copal Fluting	ditto	1 0 6
Hard Drying Oak	ditto	0 18 0
Fine Hard Drying Oak	ditto	0 19 0
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 12 0
Best ditto	ditto	1 2 6
Best Japan Gold Size		0 12 6
Best Black Japan		0 10 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 6
Berlin Black		0 14 0
Knotting (patent)		1 5 0
French and Brush Polish		0 17 0
Liquid Dryers in Turpbine		0 9 0
Cutrss Black Enamel		0 7 0

NEW BUILDINGS IN SCOTLAND

Campbeltown.—Houses.—The Town Council of Campbeltown are inviting tenders for four blocks of houses, each containing four houses of three apartments and four blocks of houses each containing four houses of two apartments, proposed to be erected at Castleacres, Campbeltown. The architects are Messrs. James Thomson and Son, 7, Victoria-place, Airdrie.

Carnoustie. — Houses. — The Carnoustie Town Council has agreed to go on with the last 20 of the 40 houses which they had previously resolved to erect.

Cowdenbeath.—Houses.—The Town Council are inviting tenders for the erection of 32 houses at Randolph-street. The plans are by Mr. C. A. Alexander, Burgh Surveyor.

Dumfries.—Town Hall.—The Dumfries Town Council has agreed to a proposal to erect a new town hall on the site of the old town hall in Buccleuch-street at a cost of about £45,000.

East Stirlingshire.—Housing.—Tenders for the erection of 200 houses at a total cost of £62,745 have been accepted by the Eastern District Committee of Stirling County Council.

Edinburgh.—Bandstand.—The Edinburgh Town Council has agreed to make provision in next year's estimates for a new bandstand in Princes-street-gardens at an estimated cost of £2,500. The site is to be at the extreme west end of the gardens.

Edinburgh.—Buildings.—The following were among warrants granted at the Edinburgh Dean of Guild Court:—C. and J. Brown, alterations at 31-35, South Clerk-street; City, electricity transformer house at Edinburgh-Stirling road, near Turnhouse Station; City, new walls and railings at Lothian-road; Walter J. Clephane, alterations at 59, High-street; Education Authority, janitor's house at Gorgie-road.

Glasgow.—Aerodrome.—It is understood that a further stage has been reached in connection with the proposal by the Glasgow Corporation to establish a municipal aerodrome. The Corporation has opened negotiations with the owners of ground near Renfrew.

BUILDING TRADE WAGES IN SCOTLAND*

The following are the present rate of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons'‡ Bricklayers'† Plasterers'†
Aberdeen	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Airdrie	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Alexandria	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Arbroath	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/5½	1/1
Ayr	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Bathgate	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2 to 1/3
Blairgowrie	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-
Bo'ness	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Coatbridge	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Dumbarton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Dumfries	1/6½	1/6½	1/7½	1/7½	1/6½	1/6½	1/6½	1/2
Dundee	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3 †1/2½
Dunfermline	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	‡1/2½ †1/2½
Edinburgh	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1/2½
Falkirk	1/7½	1/7½	1/7½	1/8	1/7	1/7	1/8½	1/2½
Fort William	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Galashiels	1/6½	1/7	1/8½	1/7	1/6½	1/6½	1/7	1/2
Glasgow	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Greenock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½
Hamilton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2
Hawick	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½
Inverness	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/- to 1/2
Kilmarnock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Kirkcaldy	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Kirkwall	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanark	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Leith	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1/2½
Motherwell	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1/2½
Perth	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Stirling	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Stirlingshire (Eastern District)	1/7½	1/8	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Wishaw	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 192.

LAND, PREMISES, Etc.
FOR SALE, TO LET, & WANTED

BELMONT ESTATE FROM CAT HILL TO COCKFOSTERS.
12 miles from Marble Arch, one mile Oakleigh Park Station. This charming residential Estate now developed ready to be sold off in plots. Over 300 ft. above sea-level, gravelly soil. Choice FREEHOLD BUILDING SITES FOR SALE, in large or small plots. Plans may be inspected and further particulars obtained from the Owner, THOMAS ADAMS, Contractor, West Green, N.22. 'Phone: Mountview 1915.

EXCEPTIONAL BUILDING ESTATE.—Close to L.M.S. and Baker-loo Stn. Houses and shops. School next to Estate. All services. Ripe for immediate development. Undoubted sale for small houses. Total area 13 acres. Price £750 per acre.—Apply to EDWARDS, 1, Sudbury-parade, Sudbury Town, Middlesex. 'Phone: Wembley 2351.

'TWIXT THE CITY AND THE SEA.
FOR SALE.—The Best BUILDING SITES round London, 10 miles from Charing Cross on Southern Electric Railway, with excellent service of trains to all parts. Special terms to Builders. Houses selling well.—Full particulars from H. SAMBOY SALTER, Land Agent, West Wickham, Kent.

TO BUILDERS, ETC.
A PROMINENT CORNER PROPERTY, opposite CRYSTAL PALACE (Low Level) STATION, excellent House and Shop; lately occupied by a Builder. Lease 52 yrs. Only £775, with Vacant Possession.—COX & MARTIN, Fife House, Kingston-on-Thames.

BUILDER'S OPPORTUNITY.
KINGSTON HILL (Park-road).—FREEHOLD SITE, suitable erection Workshops or 2 Small Villas; also 6-roomed House, now vacant. Only £395 the lot.—COX & MARTIN, Fife House, Kingston-on-Thames.

ON THE FRINGE OF LONDON.
FREEHOLD BUILDING LAND FOR SALE at EDGWARE, Middlesex, on well-positioned Estate (near Tube), now being actively developed. Considerable frontage with all services immediately available. Suitable for the erection of Houses selling at about £800/£900. Roads to open up further frontage now in course of construction. Lovely open country. First-class shopping promenades. Exceptional amenities and tube railway service. Building Finance can be arranged to approved Builders if required.—Plans and further details of SOLE AGENT, LESLIE RAYMOND, F.S.I., F.A.I., 34/35, The Mall, Edgware.

CHESHAM, Bucks.—15 ACRES well-situated FREEHOLD LAND, ripe for villas and shops. Mile of station. Gravel soil. Price £2,250.—F. NESBITT KEMP, Architect, 34, Somerset-road, Twickenham.

TO SUCCESSFUL BUILDERS AND SPECULATORS.—Exceptional opportunity. 332 feet, main road Land, High-road, Whetstone. No restrictions. Rapidly rising neighbourhood. £23 per foot.—'Phone: Hillside 0065. BENNETTS, Tally Ho! Corner, N. Finchley. Auction if not sold (24th Jan., 7 p.m.).

OPPORTUNITY FOR REBUILDING OR PROFITABLE CONVERSION.
MESSRS. ALFRED SAVILL & SONS are instructed to SELL or LET ST. SEPULCHRE VICARAGE, CHARTERHOUSE-SQUARE. Site area, approx. 3,240 feet super.; or existing period house, possessing great character, might be modernised and added to by building over vacant land at rear.—Particulars, 2 and 3, Royal Exchange, Cornhill, E.C.3.

FREEHOLD JOINERY WORKS, North London, equipped with machines and electricity. Price £850. Small stock at valuation.—Box 229, Office of "The Builder."

SOUTHFIELDS.—Excellent FREEHOLD BUILDING SITE TO BE SOLD, corner Augustus-road and Sutherland-grove; near station, park, golf, tennis. Suitable for distinctive double-fronted corner House, to sell at about £2,000, for doctor or dentist. Moderate price, including all road charges paid.—Apply, BOSWORTH, 33, Marlborough-road, Wimbledon Park.

WANTED.—LAND, about 100 ft. Frontage, for Small Houses, in or near London.—Box 242, Office of "The Builder."

FREEHOLD CINEMA SITE FOR SALE, occupying prominent position in the main High-street, Watford. Frontage to three roads. Sufficient space for large Super Cinema. Also room for Shops, Flats, and Garages.—320 ft. frontage by 140 ft.—For further particulars apply, PRYOR, 114, High-street, Watford.

VALUABLE BUILDING ESTATE, close to station, buses, shops, and schools. Centre of film industry, Elstree. Only 13 miles from London. Room for about 50 small houses, in great demand. Also Main Road Frontage of about 750 ft., suitable for shops, flats, etc. All services. Ripe for immediate development.—For further particulars apply, PRYOR, 114, High-street, Watford.

SIMPLE EXAMPLES OF REINFORCED CONCRETE DESIGN.

Contents:
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By Oscar Faber, O.B.E., M.Inst.C.E., etc.

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CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	38	0
Add if in underpinning in short lengths	" "	7	0
Add if in floors 6 in. thick	" "	3	3
Add if in beams	" "	3	9
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	32	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	10	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	"	0	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	" "	9	6
Three-quarter-inch on flats in two thicknesses	" "	6	3
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	2

MASON.

		s.	d.
York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Beer stone and all labour fixed	" "	15	0
Portland stone fixed	" "	20	0

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	5	0
Do. joists	" "	5	6
Do. roofs, floors and partitions	" "	6	0
Do. trusses	" "	8	6

		⅞"	1"	1¼"	2"
Deal rough close boarding	per sq.	35/6	40/-	45/-	72/-

		s.	d.
Fir centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	0	11
Centre for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		⅞"	1"	1¼"	1½"
Deal-edges shot	per sq.	—	44/6	53/-	60/6
Do. tongued and grooved	"	—	49/-	57/6	65/-
Do. matchings	"	45/-	51/-	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/-	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Dc.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights ; average size	" "	3	9

DOORS.

		1½"	1¾"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1½"	1¾"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/4	1/6	1/9
Add if cross-tongued	"	2d.	2d.	2d.

STAIRCASES.

		1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets		2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed		1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail : average, 3 in. × 3 in.	" "	6	0
Add if ramped	" "	12	0
Add if wreathed	" "	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	1¼d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	"	19	0
Do. stanchions	"	21	9
In roofwork	"	27	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/6	1/9	2/-	2/6
Ogee Do. Do.	"	1/9	2/-	2/6	3/3
Rain-water pipes with ears	"	1/9	2/7	—	—
Extra for shoes and bends	each	4/4	5/11	—	—
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	44	0
Do. Do. in flats	"	43	0
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	" "	1	3
Copper nailing	" "	0	3

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	1/2	1/9	2/-	3/4	4/-	—
Do. service	"	1/8	2/2	2/7	3/10	—	—
Do. soil	"	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	—
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"	—	—	—	14/7	19/6	—
Bib cocks and joints	"	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	"	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	6
Do. Do. Sirapite	" "	2	9
Do. Do. Keen's	" "	4	0
Add saw lathing	" "	1	7
Add metal lathing	" "	2	6
(Not including hangers or runners, etc., for suspended ceilings.)			
Portland cement screed	" "	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	6

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	8½
26-oz. Do.	" "	1	0
Obscured sheet	" "	1	1
⅛-in. rolled plate	" "	0	9
¼-in. rough rolled or cast plate	" "	0	10½
¼-in. wired cast plate	" "	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TRADE NEWS

Notice of Removal.

Messrs. Haines & Son have now removed into larger, lighter, and more convenient premises at 15/16, America-square, London, E.C.3. The telephone numbers have been altered to Royal 8248/9.

Desk Diary Refills.

Messrs. Crompton Parkinson, Ltd., of Bush House, Aldwych, W.C.2, inform us that if any of our readers have one of the company's desk diaries in their possession and have not yet received a 1930 refill, one will be immediately dispatched upon application to the London office.

Midland Bank Dividend.

The directors of the Midland Bank, Ltd., report that, full provision having been made for all bad and doubtful debts, the net profits for the year ended December 31, 1929, amount to £2,665,042, which, with £848,564 brought forward, makes £3,513,606. After various allocations, the directors recommend the payment of a dividend for the half year ended December 31, 1929, at the rate of 18 per cent. per annum, less income tax, payable February 1, 1930.

Westminster Bank, Limited.

The net profits of Westminster Bank, Ltd., for the past year, after providing for bad and doubtful debts and all expenses, amount to £2,160,384. This sum, added to £552,196 brought forward from 1928, leaves available the sum of £2,712,580. The dividend of 10 per cent. paid in August last on the £4 shares and 6¼ per cent. on the £1 shares absorbs £678,138. A further dividend of 10 per cent. is now declared in respect of the £4 shares, making 20 per cent. for the year; and a further dividend of 6¼ per cent. on the £1 shares will be paid, making the maximum of 12½ per cent. for the year.

Patents.

We learn that, although Messrs. King's Patent Agency, Ltd., of 146a, Queen Victoria-street, E.C.4, has just celebrated its "coming-of-age" (having been incorporated in the year 1908), Mr. B. T. King personally has been actively engaged in the patenting of inventions and the registration of trade marks for over 43 years, being articled in 1886. The secretary (Mr. Robert Hunter) has for many years been registered as a patent agent, and the technical manager (Mr. E.C. Axe) is also duly qualified as a patent agent. It may be taken as assured that the efficiency and continuity of the agency is, and will be, well maintained; and that any inquiries from readers will receive competent attention.

Electric Washing Machines.

In the past, electric washing machines have, in many cases, been too costly to include as standard equipment in moderate-priced homes on new estates. Messrs. L. G. Hawkins & Co., Ltd., of 30/35, Drury-lane, Kingsway, London, W.C.2, are just introducing, however, the new "Hera" (family size) electric washer, selling at a very low price. We learn that already certain builders have placed orders for quantities, having decided to make it standard equipment in their houses in place of the old-fashioned washboilers and coppers. The Shorefield Estate at Oxted, Surrey, have ordered 115 for this purpose; Messrs. H. C. Jones, of Surbiton, have ordered 50, and many smaller contracts have been placed. From a leaflet giving details of a suitable installation for housing estates, we gather that the machine has incorporated in it features which should make a great appeal to housewives. Architects, builders, and local authorities interested should apply for a booklet.

Demonstration of Decorative Materials.

Presided over by Mr. George Arnold, a demonstration of new and attractive decorative materials will be held by Messrs. Lewis Berger & Sons, Ltd., Homerton, London, E.9, at the Clarence Hotel, Brighton, from January 17-22. All architects, decorators, municipal authorities, surveyors, merchants, etc., in the Brighton district, have received an invitation. The demonstration has been divided into two periods, January 20-22 being reserved for architects only. The professional demonstration, besides showing new decorative effects in plastic wall paint, rough-finish stone paint, two-coat finish enamel-paint, flat oil paint, oil-bound water paint, etc., will specially feature the remarkable new product "Dusseal." We learn that this is an excellent neutraliser of lime and moisture in Portland cement, reinforced concrete, lime putty, Parian, Sirapite, and all plaster, including gypsum, and that two coats over new plaster ensure that even highest class wallpapers will not be stained or have their colourings affected by moisture or lime. A further quality is that it holds back magnesium sulphate (frothing) which comes through plaster from the bricks and which otherwise will destroy any paint finish. Such advantages would justify further inquiry from any architect, decorator or builder who has experienced like trouble.

New Stratford-on-Avon Bridge.

It is learned that after a controversy lasting over six years, a scheme for the new river bridge at Stratford-on-Avon has been decided upon. Clopton Bridge is not to be either widened or strengthened, but left as at present, and Sir Reginald Blomfield's scheme (for a structure to cross the Avon at a point now occupied by the disused tramway bridge) to be carried out immediately. Tenders were put out at the end of last year, and it is expected that work should be well under way in March. The new bridge will be in multi-coloured brick with stone dressings. It will, in all, cost about £50,000.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modifications.*
¶ Denotes *accepted by H.M. Office of Works and H.M. War Office.*

Acton.—New public convenience in Acton Park, for the T.C. Borough Engineer, Municipal Offices, Acton, W.3:—

*T. Millman, Ltd., Gloucester-road, Ealing, W.5	£1,715

Barnet.—Operating department at Wellhouse-lane, for the B.G. Messrs. A. Saxon Snell & Phillips, F.F.R.I.B.A., architects, 9, Bentinck-street, Manchester-square, W.1:—

W. Slough, Barnet	£13,045
Bowley Bros., Tottenham	12,400
Wilmott & Sons, Hitchin	11,798
Lister & Co., London	11,712
Lacey & Sons, Luton	11,685
G. Dibblin, Dartford	11,648
Miskin & Sons, St. Albans	11,585
Lee & Silvester, Enfield	11,565
Webster & Cannon, Aylesbury	11,418
J. & C. Bowyer, Ltd., Norwood	11,416
King & Stannard, Whetstone	11,384
Welwyn Builders, Ltd.	11,053
J. Dennis, St. Albans	11,052
Chas. Brightman, Watford	10,982
*H. E. Winskell, Barnet	10,883

Bath.—Extensions and alterations to the printing works of Sir Isaac Pitman & Sons, Ltd., at Twerton-on-Avon. Mr. R. Algernon Ley, F.R.I.B.A., architect, 214, Bishopsgate, London, E.C.2:—

*Hayward & Wooster, 108, Walcot-street, Bath	

Birmingham.—Electric lighting installation at the Little Bromwich Fever Hospital, for the T.C.:—

*Etna Lighting and Heating Co., Ltd.	

Birmingham.—Installation of electric lighting apparatus at Gunter-road school, for the E.C.:—

*Ellis & Ward, Ltd.	

Birmingham.—Extensions at the Girls' Camp school at Blackwell, and erection of classrooms at Pager-rd. school, for the E.C.:—

*Cowiesons, Ltd., Birmingham.	

Birmingham.—Installation of electric light at the Hockley Welfare centre, for the Corporation:—

*L. Scrutton, Birmingham.	

Black Notley.—Two cottages at the Sanatorium, for the Essex C.C.:—

*Welwyn Builders, Ltd.	£1,155

Bolton.—Convenience on land in Bury-road, for the Corporation. Mr. W. Russell Brown, Borough Surveyor:—

*J. Brown, Green-lane, Bolton.	

Bradford.—For reconstruction of shop property in Manningham-lane, for Messrs. Busbys, Ltd.:—

Builders—*Chas. Booth & Son.	
Joiners—*Wilkinson & Dawson.	
Steelwork—*H. Barnett & Sons.	
Plumber—*L. Hartley.	

Bristol.—Shopfront, interior fittings and structural work at 35, East-street, Bedminster, Bristol, for Messrs. England & Sons:—

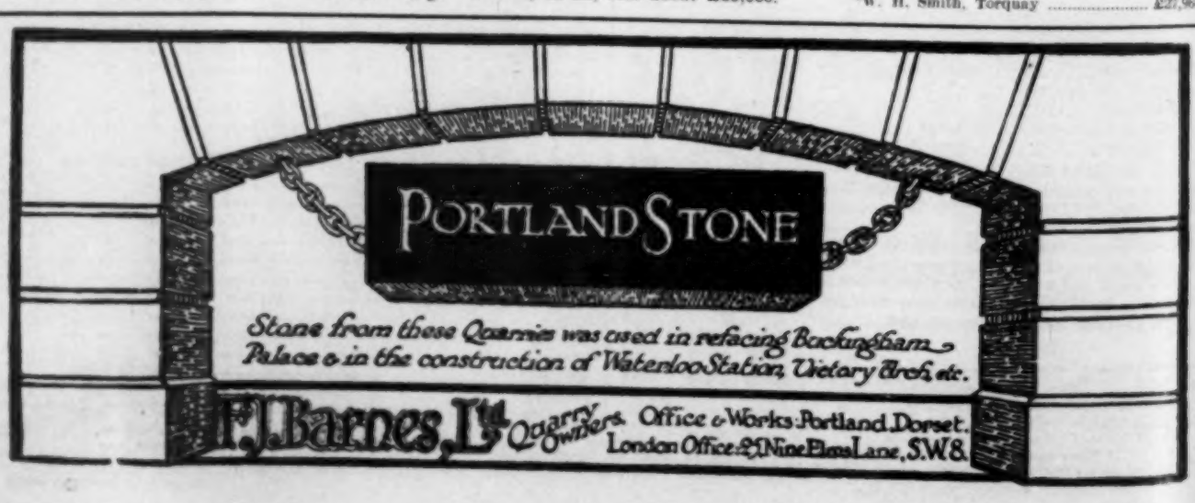
*A. Edmonds & Co., Ltd., Constitution-hill, Birmingham.	

Brotherton.—Demolition and re-erection of the "Fox Inn" public house, for Messrs. Tadcaster Tower Brewery Co., Ltd., George-street, York. Messrs. Garside & Pennington, F.R.I.B.A., architects, Ropergate, Pontefract:—

*L. Matthews & Son, Leeds.	

Burnham.—Promenade and marine lake, for U.D.C.:—

*W. H. Smith, Torquay	£27,960


PORTLAND STONE
Stone from these Quarries was used in refacing Buckingham Palace & in the construction of Waterloo Station, Victory Arch, etc.
F.J. Barnes, Ltd. Quarry Owners. Office & Works Portland, Dorset.
London Office 21 Nine Elms Lane, S.W.8.

Caherciveen.—Reconstruction in reinforced concrete of Caherciveen Bridge, for the Kerry C.C. Mr. W. F. Quinlan, secretary, County Council Chambers, Ashe Memorial Hall, Tralee:—

J. Hearne & Son, Ltd., Waterford	£8,795	5	6
*J. J. Buttimer & Co., 15, Pembroke-road, Dublin	7,419	7	10
T. Thompson & Son, Ltd., Carlow	7,408	0	0

Cambridge.—Extensions at St. Catherine's College. Messrs. Kennedy & Nightingale, architects, King's-road, London, S.W.3:—

*Coulson & Son, Ltd., 37, St. Andrews-street, Cambridge.

Chesterfield.—Public conveniences on (a) Queen's-park annexe; and (b) Highfield Hall recreation ground, for the T.C. Mr. Vincent Smith, Borough Engineer:—

*J. Heathcote, Chesterfield £594

Chipping Sodbury.—Repairs and recovering roofs of 12 houses at Woodend, Frampton Cotterell and 2 houses at Dodds-lane, Pucklechurch, for the R.D.C. Messrs. W. H. Williams & H. Hale, surveyors. Quantities by the surveyor:—

*Wilmott Bros., Cock-row, Kingswood, Bristol £260

Croydon.—New school, for the Whitgift Foundation. Messrs. Leathart & Granger, architects, 7, John-street, Adelphi, W.C.2:—

F. L. Griggs, London	£125,531
C. F. Kearley, London	124,875
Holliday & Greenwood, London	123,774
Patman & Fotheringham, London	122,721
Truett & Steel, Thornton Heath	121,751
Higgs & Hill, London	121,840
Holloway Bros., London	121,482
V. J. Lovell & Co., London	121,029
— Carmichael, London	120,893
—, Wallace, Maidstone	120,674
Grace & Marsh, Croydon	120,419
Allan Fairhead, London	118,908
Holland and Hannen, London	118,650
W. Moss & Son, London	116,720
Walter Lawrence, London	115,656
*E H. Smith, Croydon	113,300

Culter.—Five additional blocks of houses at Craigton, for the Aberdeen D.C.:—

Mason—			
*J. Clark, Culter	£3,045	0	
Joiner—			
*A. Thomson, Culter	1,650	0	
Plumber—			
*A. Taylor, Aberdeen	964	14	
Plasterer—			
*Coutts & Leask, Aberdeen	1,007	8	
Slater—			
*Shaw & Son, Culter	460	0	
Painter—			
*Stevenson & Son, Aberdeen	145	0	

Enniskillen.—Filter-house at the Waterworks, for the U.D.C.:—

J. Donnelly & Son	£600
J. Bloomfield	580
J. Jeffers & Son	560
*J. Harvey & Sons	532

Faringdon.—Conversion of certain premises in Southampton-street into public conveniences, for the R.D.C. Mr. J. W. Harris, architect, East Challow, Wantage:—

P. Chick, Highworth	£1,079
Bartlett Brothers, Witney	987
Cadel Brothers, Faringdon	975
A. C. Carter, Chaddleworth	787
Pendell & Spinage, Stanford-in-the-Vale	778
*W. A. Wheeler & Co. (Wantage), Ltd., Wantage	668
W. King, Lechlade	668

Featherstone.—House at the Lister Baths, for the U.D.C. Mr. S. Chesney, A.R.I.B.A., Council Offices:—

*L. Rodgers, Ackworth-road, Purston, Featherstone, Yorks £507

Galway.—House for the waterworks caretaker, for the U.D.C.:—

*M. Joyce	£650
Engineer's estimate	711

Glasgow.—Store premises, for Messrs. Marks & Spencer, Ltd. Messrs. James Monro, L.R.I.B.A., architects, 134, Bath-street:—

*Bovis (1928), Ltd., 44, Upper Berkeley-street, London.

Glasshoughton.—Miners' pit-head baths, for the Glasshoughton Collieries, Ltd., and the Miners' Welfare Committee. Mr. J. H. Forshaw, architect:—

*L. J. Gallagher & Sons.

Hastingden.—Twenty-four non-parlour type houses, at Longshoot, for the T.C. Mr. R. Taylor, Borough Surveyor:—

*Garbutt & England, Accrington.

Hemsworth.—Additions to Hemsworth Secondary school, for West Riding E.C. Mr. H. Wormald, A.R.I.B.A., County Architect, County Hall, Wakefield:—

*J. W. Waller, South Elmsall	£8,996
Joiner—	
*J. W. Waller, South Elmsall	2,342
Slater—	
*H. Parker, Leeds	451
Plumber—	
*E. Borley & Son, Barnsley	1,295
Plasterer—	
*H. Markwell, Barnsley	739
Painter—	
*S. W. Nicholson, Mexborough	262
Asphalter—	
*J. W. Waller, South Elmsall	612

Hereford.—Forty non-parlour type houses on College-rd., for the T.C. Messrs. Bettington & Son, architects, Palace-chambers:—

*C. Jewell & Son, Hereford £14,602

Horsforth.—Playing fields, for U.D.C.:—

Builder—	
*T. Throup & Sons	£196
Fencing and gates—	
*R. Houseman	375

Killarney.—Six five-roomed houses, for the U.D.C.:—

*M. Casey	each £492

Kilrush.—Heating the hospital, for the Clare County Board of Health:—

*Musgrave & Co., Dublin £282

Leeds.—Block of offices and shops on a site in Guildford-street. Mr. G. Atkinson, F.R.I.B.A., architect, 1, Mark-lane:—

Main Contractors—*T. Joseph Wright & Sons, 57a, Skinner-lane, Leeds.

Steelwork—*S. Butler & Co., Ltd., Albion Works, Stanningley, Leeds.

Leyland.—New buildings, for the Governors of Leyland Blashaw's Grammar School. Mr. Stephen Wilkinson, F.R.I.B.A., architect, 16, Ribblesdale-place, Preston:—

*J. Whittaker & Sons (Blackburn), Ltd., Blackburn.

Liversedge.—Twenty houses at Hightown-road:—

*Sutcliffe & Addison.

¶London.—The following contracts have been entered into by H.M.O.W. during the week ended the 4th instant:—

Prescott telephone exchange—erection of: J. Johnson & Son, Caroline-street, Wigan.
Worcester district—ordinary works and repairs: Phelps & Johnson, Little London, Worcester.
Newbury Post Office and telephone exchange—steel casements: Humphries, Jackson & Ambler, Ltd., Brookhouse Works, Carnbrook, Manchester.
Whitchurch telephone exchange—erection of: S. W. Redwood & Sons, Bishopston, Bristol.
Oxford Station sorting office—heating system and fire service: H. Tattersall, Ltd., Spotland Bridge, Rochdale.
National Physical Laboratory, Teddington—extension to packing shed: Negus, Ltd., 1, Laurence Pountney Hill, E.C.4.
Gateshead Employment Exchange—heating and hot water apparatus: Brightside Foundry and Engineering Co., Ltd., 8, Oxford-street, Newcastle-on-Tyne.
South Western District Post Office, Howick-place, S.W.1—internal painting works: Decra, Ltd., 11, Hanbury-road, Acton, W.3.
Nelson employment exchange—erection: Blakeley & Son, Ashdene, Greenberfield-lane, Barnoldswick.
Wick Wireless Station—extensions and alterations: Robert Shearer & Son, John-street, Wick.

¶London.—The following works contracts have been placed by the War Office during the week ended January 9:—

Beverley, Victoria Barracks—installation of electric lighting—C. Ramsay & Sons, South Shields.
Lichfield—periodical services—C. J. Else & Co., Ltd., Matlock.
Bovington—artificers' work—G. Riches, Fareham.
Tidworth, Moolian Barracks—alterations and additions to R.A.O.C. sergeants' mess—James & Crockerell, Durrington, Salisbury.
Tilshead—erection of quartermasters' offices and stores—W. E. Chivers & Sons, Ltd., Devizes.
South Aldershot, Buller Barracks—alterations to buildings—J. R. McLean Keil, Ltd., Camberley.
North Aldershot, Oudenarde Barracks—renewal of slate roof to officers' mess—E. Matthews & Co., London.

London.—Internal painting of the ladies' swimming bath, for the Hackney B.C. Borough Engineer and Surveyor:—

*W Silk & Son, Ltd., 13, High-street, Homerton, E.9. ..... £383

London.—Repairing a portion of the fence at Sydenham recreation ground, for the Lewisham B.C.:—

G. N. Gwilt	£148	2	0
L. Gassos	123	7	10
*R. A. Blake & Son	115	8	8

London.—Turbine house and switch house buildings, roads, drains, etc., including building foundations, at Millfield generating station, for the Hackney B.C.:—

William Moss & Sons, Ltd.	£47,450	0	
D. G. Somerville & Co., Ltd.	45,460	0	
Edwards Construction Co., Ltd.	45,097	0	
W. & C. French	44,116	18	
Galbraith Bros., Ltd.	43,990	0	
Sir Lindsay Parkinson & Co., Ltd.	43,282	0	
F. R. Hipperson & Son	41,911	13	
Industrial Constructions, Ltd.	40,086	1	
*J. Jarvis & Sons, Ltd.	39,893	0	

Long Eaton.—11 houses at Hawthorne and Myrtle-avenues, and 52, Wellington-street, and Duckholm-road, for the U.D.C. Mr. H. Raven, architect, Town Hall:—

*F. Perks & Sons, Long Eaton £20,164

Loughborough.—New fire station and firemen's cottages in Bridge-street, for the T.C.:—

†T. Barker & Sons, 14, Swan-street, Loughborough £8,500

Luton.—Three pairs houses at Studham, for the R.D.C. Mr. H. Pickering, architect and surveyor, 73, West-parade, Dunstable:—

Matthews & Welch, Luton	£2,220	0	
H. Fidler & Son, Luton	2,238	0	
A. & E. Fensome, Luton	2,220	0	
Wells & Son, Luton	2,158	10	
E. Adams, Harpenden	2,082	0	
*B. W. Wood, Dunstable	2,070	0	

Luton.—Additions and extensions to the premises of the Skeff Ball Bearing Co., Ltd., Leagrave-road. Messrs. Manning & Steel, L.R.I.B.A., architects, 5, George-street West, Luton:—

*Luton Building Co., 37a, Church-street, Luton.

Market Harborough.—Reinforced concrete water reservoir, for the U.D.C. Mr. H. G. Coales, chartered civil engineer:—

Bierrum & Partners, London	£3,796	9	6
Lois & Kier, Stoke-on-Trent	3,369	10	5
Jos. Clark, Nottingham	3,318	6	6
F. C. Construction Co., Ltd., Derby	3,230	6	2
Concrete Structures, Ltd., London	3,179	6	8
The Yorkshire Hennibique Co., Ltd., Leeds	3,177	1	6
Wm. Wilson & Co. (Newcastle), Ltd., Newcastle	3,134	3	9
Gilbert, Norman & Janes, Market Harborough	2,923	17	3
T. Beighton, Chesterfield	2,865	17	6
Cumberland R.C.C. Co., Ltd., Harrington	2,865	6	2
W. W. Brown & Sons, Market Harborough	2,811	15	0
Ubique Construction Co., Ltd., Southend-on-Sea	2,805	12	7
T. Bugbird & Son, Ltd., Stamford	2,754	13	2
T. Hickman & Sons, Market Harborough	2,270	0	0
*H. H. Garlick, Market Harborough	2,246	17	11

Manchester.—Electrical installations at the housing estates (a) Blackley; (b) Newton Heath; (c) Chorlton; (d) Withenshaw, for the Housing Committee:—

(a) *R. H. Clampett & Co., Manchester.
(b) *G. F. Latham, Manchester.
(c) *Hall & Stinson, Ltd., Sheffield.
(d) *F. L. Napier, Ashton-on-Mersey.

Manchester.—For (a) heating installation; (b) electrical installation; (c) electric light of gymnasium, Levenshulme High School for Girls; (d) heating at Victoria-avenue School and Birchfields Road New School:—

(a and d) *J. Turton & Sons, Manchester.
(b and c) *J. Adams, Ltd., Manchester.

Manchester.—Electric light installations at Varna-street Infants' School and St. Mary's-road Municipal School, for the E.C.:—

*A. E. Sudlow & Co., Manchester.

Manchester.—For (a) erection of central establishment laundry at Moss Side; (b) extension of public wash-house and females' wash baths, Gorton baths; (c) tiling of walls first-class swimming baths, Gorton baths, for the Baths and Wash-houses Committee. Mr. H. Price, A.R.I.B.A., City Architect:—

(a) *Normanton's, Ltd., Manchester.
(b) *J. H. Billings & Co., Ltd., Chorlton-on-Medlock.
(c) *Conway & Co., Manchester.

Newcastle-on-Tyne.—Two story garage, for Messrs. Travers, Ltd., motor engineers, Carlisle-square. Messrs. Cackett & Burns Dick, F.R.I.B.A., architects, Pilgrim House, Pilgrim-street:—

*W. Milne, Percy-street, Newcastle.

Nottingham.—New school in Gregory Boulevard for the Corporation. Mr. Thomas Wallis Gordon, Borough Surveyor:—

Main Contractor—*T. Bow, 49 Lamartine-street.
Mason work—*Pask & Thorpe, Castle Boulevard.
Plumbing—*W. Knight, Ltd., 24, Glasshouse-street.
Painter—*W. Bee, 15, Lammas-street.
Plastering—*Midland Plastering Co., Ltd., Canal-street.
(All of Nottingham.)

Oldham.—Installation of electricity at the Freehold school and wiring at the Electrical Engineering Laboratory, for the T.C.:—
*C. Worth & Co., Oldham.

Rhos-on-Sea.—Congregational church, for the Trustees. Messrs. Bradshaw, Gass & Hope, architects, Bolton:—
*J. R. Bithell.

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Rochdale.—Building in Samuel-street for electricity showrooms and offices, for the T.C. Mr. S. H. Morgan, Borough Surveyor:—
*R. & T. Howarth, Rochdale £20,000

Salford.—Structural alterations, asphalting, and partitions, at Frederick-road Open-air school, for the T.C. Secretary for Education, architect:—
Structural alterations, etc.—
*A. Tomkins, Grecian-street, Lr. Broughton, Salford £1,307 10
Asphalting—
*Sorelite Co., Whitefield, nr. Manchester 277 10

Scunthorpe.—Extensions to the "Furnace Arms" hotel, for the managers. Messrs. Garside & Pennington, architects, 45, Espergate, Pontefract:—
*T. Jenkinson & Sons, Doncaster £2,100

Southwold.—Six non-parlour houses in North-road, for the T.C. Mr. J. S. Hurst, Borough Surveyor:—

G. Grindell, Southwold	£2,163 0
W. Reade, Aldeburgh	2,159 0
A. C. Neller, Southwold	2,135 0
C. N. Field, Southwold	2,130 0
*H. Hutton, Southwold	2,086 13

Uckfield.—For (a) Six cottages in Luxford-lane, Crowborough; and (b) six at Cutts-corner, Rotherfield, for the R.D.C.:—
(a) *—, Durrant, Framfield-road, Uckfield £2,625
(b) *W. E. Beckett, Woodbury Park-road, Tunbridge Wells 2,550

Wallasey.—Yacht club, bandstand, conveniences and kiosks on the Promenade Pier, New Brighton, for the Corporation. Mr. L. St. G. Wilkinson, Borough Engineer and Surveyor:—
*W. Bradshaw, 2, Northbrook-road, Wallasey £1,778

Warrington.—162 houses on the Westy-lane site, for the C.B. Mr. A. M. Kerr, Borough Engineer and Surveyor:—
Clough & Gaskell, Ltd., Billinge-road, Spring Bank, Wigan.

Wolverhampton.—For (a) 30 two-bedroom houses on the Falkland-street site; and (b) 25 non-parlour houses on the Rough Hills site, for the C.B.:—
(a) J. McLean, Govan, Wolverhampton £10,101
(b) A. M. Griffiths & Son, Ltd., Thomas-street, Wolverhampton ... 9,282

Wrexham.—Alterations and extensions, etc., to Denbighshire Technical Institute, for the Denbighshire E.C. Mr. W. D. Wiles, County Architect, Acton Hall, Wrexham:—
Additions to Technical Institute—
*W. E. Hughes, Ltd., 400, Boro'-road, Birkenhead £25,869
Central School, Acrefair, Wrexham—
*T. Lowe & Sons, Carmen-street, Burton-on-Trent £15,679

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